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PREPARING A DEVELOPMENT CONSTRAINTS INFORMATION SYSTEM

CASE STUDY
EASTHAMPTON, MASSACHUSETTS

Local Assistance Series 13

Massachusetts Department of Community Affairs
Office of Local Assistance

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PREPARING A DEVELOPMENT CONSTRAINTS INFORMATION SYSTEM

CASE STUDY:
EASTHAMPTON, MASSACHUSETTS

LOCAL ASSISTANCE SERIES PUBLICATION NUMBER 13

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The preparation of this report was financed in part through a Comprehensive Planning Grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1964, as amended.

PREFACE

This report is part of the local assistance series prepared by the Office of Local Assistance. The local assistance series consists of reports prepared as a result of extensive work conducted by the Office in various localities throughout the Commonwealth. To date, fifteen projects have been undertaken. While these studies are conducted for specific communities, they are designed to be of value to other cities and towns faced with similar planning and management issues. A list of reports prepared by the Office appears on the back cover of this report.

In addition to the series of in-depth studies, the Office provides other services to local governments. The Office assists local governments in the solution of problems related to community development, planning, public administration, municipal finance, and related fields. To deliver its services, the Office functions through three sections: Local Liaison; Community Planning and Management; and Municipal Advocacy and Policy.

The Local Liaison Section is staffed by municipal field representatives assigned to specific communities who maintain regular contact with local chief executives. This Section also maintains a toll-free telephone service to respond to inquiries made by individual communities (1-800-392-6445). The Community Planning and

Management Section provides community development planning and land use management services and prepares in-depth studies to assist individual communities in solving significant planning and management problems. The Municipal Advocacy and Policy Section identifies and investigates issues of common concern to all communities, and disseminates relevant information to municipalities. The staff is responsible for developing policy positions for the Governor that embody the municipal perspective on issues which affect local government. The Section also assists the Community Planning and Management Section in the preparation of in-depth studies.

This study is designed to introduce a technique for managing community development. By means of map overlays, it allows local officials and developers to determine where development problems and opportunities exist, so that growth may be directed toward areas of least community impact. The model community chosen for this study was the Town of Easthampton.

Easthampton, situated in the Connecticut River Valley of Massachusetts, occupies an area of approximately 13 1/2 square miles, and had a 1975 population of 15,084. Boston is 90 miles to the east, and Springfield, 12 miles to the south. The Town of Easthampton was selected as the model community for this study since it has zoning, public water supply, public sewerage, ample developable land, some growth pressure, and an in-house capability for maintaining and updating the materials described in this study.

The Planning and Management Section of the Office of Local Assistance wishes to acknowledge the contribution of the many local officials and citizens who were involved in this study. Without their interest, cooperation, and critique, this report would not be as meaningful to you.

We urge you to contact the Office for further information and assistance if your community is considering action in the area covered in this report. Let us know, too, if you find these studies useful or have any suggestions in improving DCA's new program of technical assistance.

We request readers to complete the evaluation form appended to this report so that we may benefit from your experience as to the value of this publication.

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DEVELOPMENT CONSTRAINTS INFORMATION SYSTEM

The information system described in this manual consists of a base map of the community, a number of transparent acetate maps to be used as overlays of the base map, and a descriptive narrative. It is designed to be used by communities to encourage and guide growth to desirable areas while discouraging growth in areas less able to sustain development.

Because it identifies not only constraints to development, but also indicates areas where development opportunities may exist in the community, it may be especially valuable to developers. In addition, it can serve as a guide in making planning decisions and preparing a community capital budget.

The activities involved in the preparation of this graphic data bank include collecting pertinent information for mapping, preparing a base map, and compiling separate overlays with accompanying explanatory narratives. The process is flexible and reasonably simple, so that the materials may be prepared and kept up to date by the community's planning board, other local officials, or interested citizens.

It should be noted that the process of preparing such an information system is in itself worthwhile as it will stimulate discussion of land use and development issues in the community.

DATA SOURCES

The initial stage of gathering and organizing data is usually the largest single task in the overall process and may require as much as two-thirds of the time and expense involved in completing an information system. Numerous information sources exist, the most important of which are local, regional, and state officials; local citizens; comprehensive or master plans; maps and aerial photographs of the area; and fieldchecks.

Discrepancies in information may be found during this stage of the process. However, minor differences should not be allowed to affect the usefulness of the information system, which is designed to give a general, community-wide graphic display of local conditions.

MAKING THE BASE MAP

In order to coordinate the use of overlays, one basic map showing selected community features (such as water bodies, roadways, etc.) as reference points is required. Sources for the base map might include United States Geologic Survey (U.S.G.S.) quadrangle maps which are available for the entire state, official community maps, engineering maps, or Massachusetts Department of Public Works Regional Series maps.

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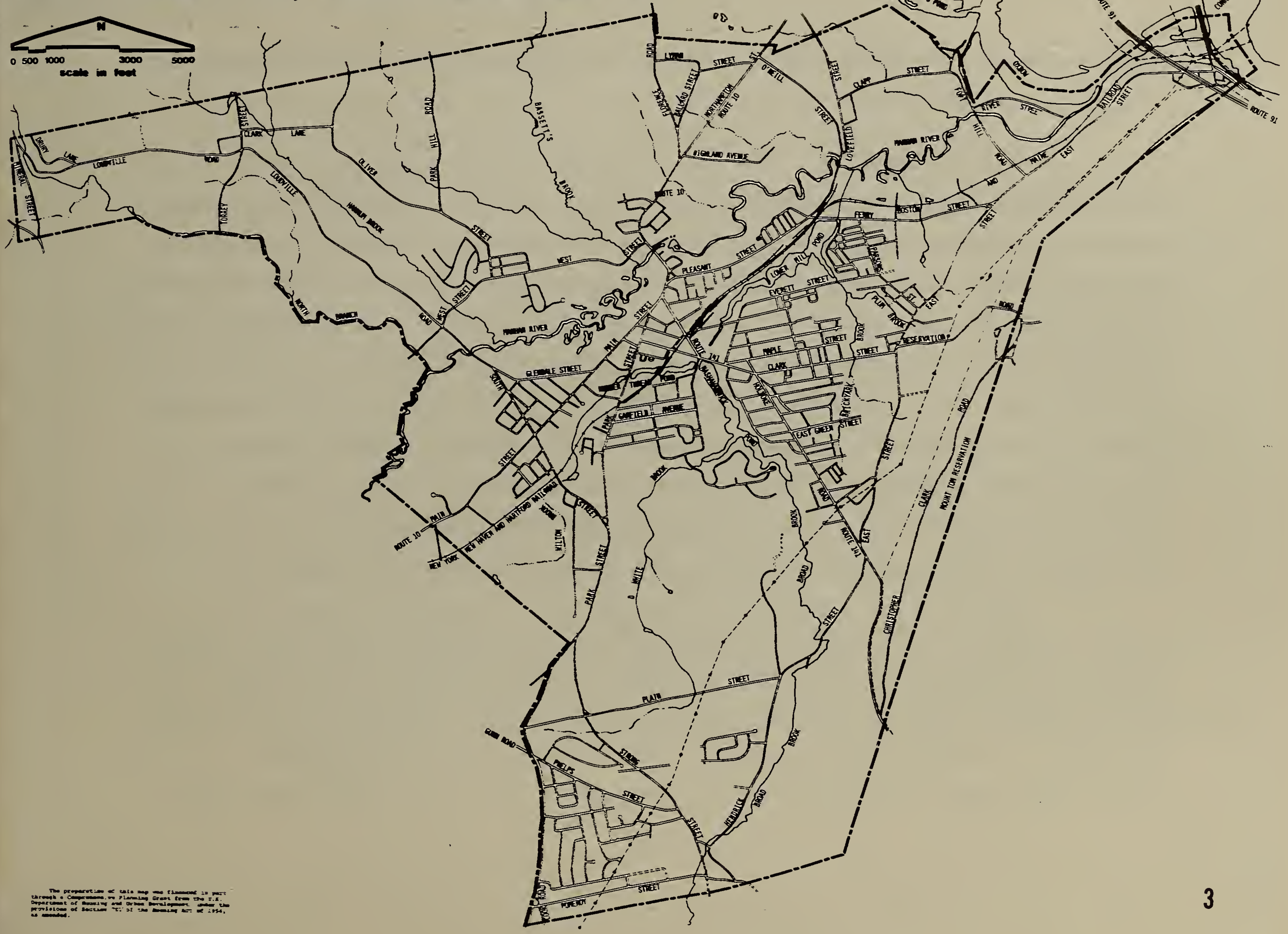

The preparation of this map was financed in part through a Comprehensive Planning Grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

The base map for Easthampton was made by assembling the three U.S.G.S. quadrangle maps which covered the Town.

A major problem in compiling a base map is transferring information from different source maps (possibly of different scales) onto a single map while still retaining accuracy. To record the selected information for Easthampton accurately, and to maintain a significant level of detail, it was decided to employ a scale of one inch to 1,000 feet which resulted in a base map of manageable size, three feet by two feet. Because the scale of U.S.G.S. maps is one inch to 2,000 feet, it was necessary to enlarge the maps to the selected scale. However, it should be noted that the scale selected for a base map will vary according to the size and shape of the specific community being studied and the actual map size desired for display purposes. (Map reduction is always more accurate and preferable to enlargement, as enlarging a map will magnify any errors and generalizations which appear in the original.)

Change of scale can be accomplished in several ways including optical projection, mechanical techniques or photo-reproduction. A variety of projection devices such as opaque projectors may be available either from the municipal offices or the school department. The source map is placed in the projector and, by adjustment, it is possible to match the scale of the projected image to that of the map being compiled.

When properly aligned, the desired information may be traced. If projection devices are available, this can be accomplished quickly and inexpensively. However, the projected image may be somewhat distorted, making proper alignment difficult.

One mechanical technique involves drawing a grid of squares on the original and drawing the "same" squares, only larger or smaller, on the map being compiled. The desired lines and positions may then be transferred by eye from one grid system to the other. This method is simple, inexpensive, and accurate, but quite time-consuming. For example, if a map scale of one inch to 1,000 feet is to be enlarged to a scale of one inch to 500 feet, one inch by one inch squares should be placed on the original map and two inch by two inch squares should be placed on the map being compiled; doubling the scale increases map area 4x. The same effect can be achieved through the use of a pantograph, a drawing instrument designed for changing scale. Changing scale by photography may be accomplished through the use of the conventional film process or by several kinds of photocopy processes, such as Photostat or xerography. Many printers, engineering supply companies, and copying/duplicating firms offer this service. This method provides a map at the desired scale, but still involves tracing the selected information. This is the most expensive process, but is the most accurate.

Once the base map has been prepared at the selected scale, several copies should be made to serve as work sheets for the overlay maps.

MAKING THE OVERLAYS

The overlay process is a method for correlating geographic information. It may be used to determine the suitability of a site for a particular land use and to identify any potential environmental and development problems.

In general, the technique involves recording information by hand onto transparent acetate sheets at the same scale as the base map, and overlaying them, one upon another, on the base map in order to identify specific sensitive areas. Special inks, markers, and tapes are available for use on acetate sheets. The overlays represent a file of recorded information in map form that is flexible and efficient, not only for analysis purposes, but also as a graphic aid for discussion and presentation. The advantage of this process is that the overlays can be used alone or in combination to indicate site characteristics which might act as constraints to development.

Each overlay should be accompanied by an explanation of the technique employed in its preparation and an interpretation of local conditions. The discussions for the Easthampton study serve only as models for the kind of material that might be included in the information system.

It is important that the overlays and accompanying descriptions be made available for use by the entire community. The original large set of overlays should be kept by the Planning Board for viewing by the general public. Copies of the narrative materials should also be made available to all local officials and local developers, and be prominently placed in the municipal library.

The following section discusses the different overlays that were prepared for Easthampton. It was felt that these were appropriate for the Town's needs; each community will make its own selection of overlay topics based upon specific local requirements.

THE OVERLAY MAPS

EXISTING LAND USE OVERLAY

Future land use will generally relate to existing development patterns. For this reason it is useful to identify and examine the patterns of existing land use. This will be of assistance in the determination of suitable locations for new developments.

Making the Overlay

- Obtain copies of the 1971 MacConnell materials which cover the community (the maps are actually U.S.G.S. maps showing MacConnell's land use categories).
- Combine land use categories to suit local needs. The complex nature of the MacConnell land use classification is beyond that required by most communities. Combining some of those categories simplifies the mapping process without sacrificing usefulness.
- Transfer the information to a worksheet.
- Fieldcheck and check the assessors' maps to update the overlay.
- Transfer the information to an overlay of the base map.

Easthampton Study

The categories used for the Easthampton land use overlay were adopted from the MacConnell classification system, the detailed land-use types being grouped into five broad categories. "Residential" included all residential land-use types and "Commercial" included all commercial categories. "Industrial" covered all industrial land uses, including freight storage facilities, sand and gravel areas, and highways. "Institutional" included all public and "quasi-public" lands (schools, churches, cemeteries, tennis courts, stadiums, and filter beds). "Open Space" included all open land, all agricultural categories, all forest land, and all wetlands. In addition, it included non-institutional recreation areas (golf driving ranges and beaches), powerlines, exposed rock, and urban open space.

The Easthampton overlay shows that the overall pattern of land development in Easthampton is similar to that of many small New England towns. Less than one-third of the land area is developed, with approximately half of that land concentrated toward the Town's center and then radiating outward along roadways. The central portion of the community contains most of the Town's commercial and manufacturing activities, as well as the higher density residential developments. Surrounding this central area are mainly lower density residential developments, a small number of medium density apartments, and large tracts of agricultural and undeveloped land.

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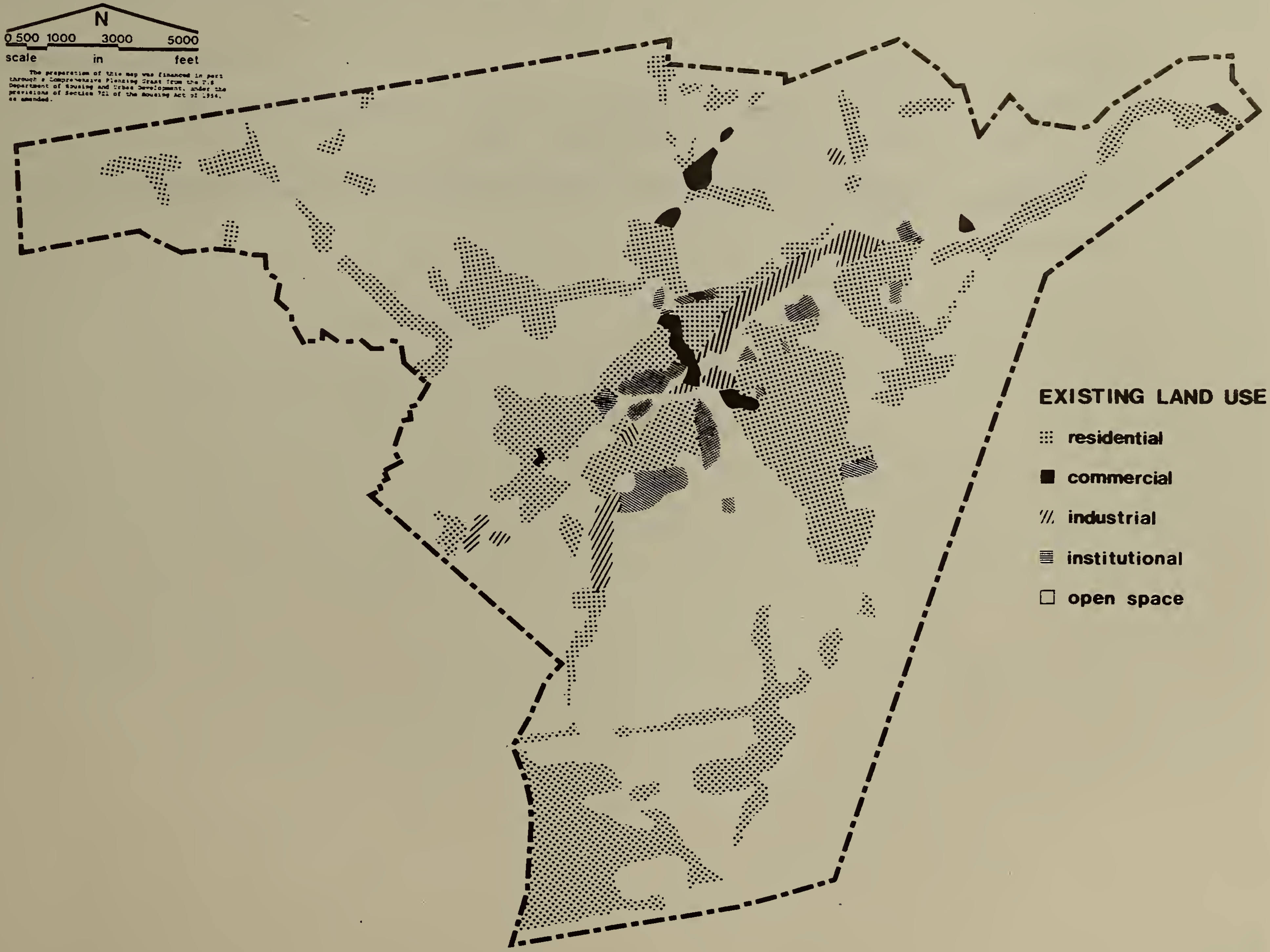

The preparation of this map was financed in part through a Comprehensive Planning Grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

EXISTING LAND USE

- ⁞⁞ residential
- ■ commercial
- ⁄⁄ industrial
- ▤ institutional
- ☐ open space

Sources for the Easthampton Study

MacConnell, William P. Remote Sensing: 20 Years of Change in Hampshire County, Massachusetts. 1952-1972. Amherst: 1975.

MacConnell, William P. Massachusetts Map Down 1975 Land Use and Vegetative Cover Mapping. Amherst: 1975.

Fieldcheck.

ZONING OVERLAY

The basic technique available to a community for control over local development is the enactment of a set of zoning regulations. Under such regulations, a municipality may be divided into a number of districts which have uniform standards for each class or kind of structures and uses permitted. Zoning bylaws must also provide for specific types of uses in specified districts which shall only be allowed by special permit. When combined with other overlays such as one showing existing land use, the zoning map may highlight areas for potential zoning modifications in keeping with the community's long term development goals.

Making the Overlay

·Take the zoning district boundaries from the community zoning map and transfer them to an overlay of the base map.

Easthampton Study

The Easthampton Zoning Bylaw and Map, dated March 25, 1972, divides the Town into seven zoning districts.

The categories provided for are:

Zoning District	Minimum Lot Size
Residential - Rural	35,000 square feet
Residential - Suburban A	15,000 square feet
Residential - Suburban B	10,000 square feet
Residential - Urban	5,000 square feet
General Business	N.A.
Neighborhood Business	N.A.
Industrial	N.A.

Sources for the Easthampton Study

Town of Easthampton, Massachusetts. Zoning Code. Easthampton: 1972.

Town of Easthampton, Massachusetts. Zoning Map of the Town of Easthampton. Easthampton: Revised 3/31/73.

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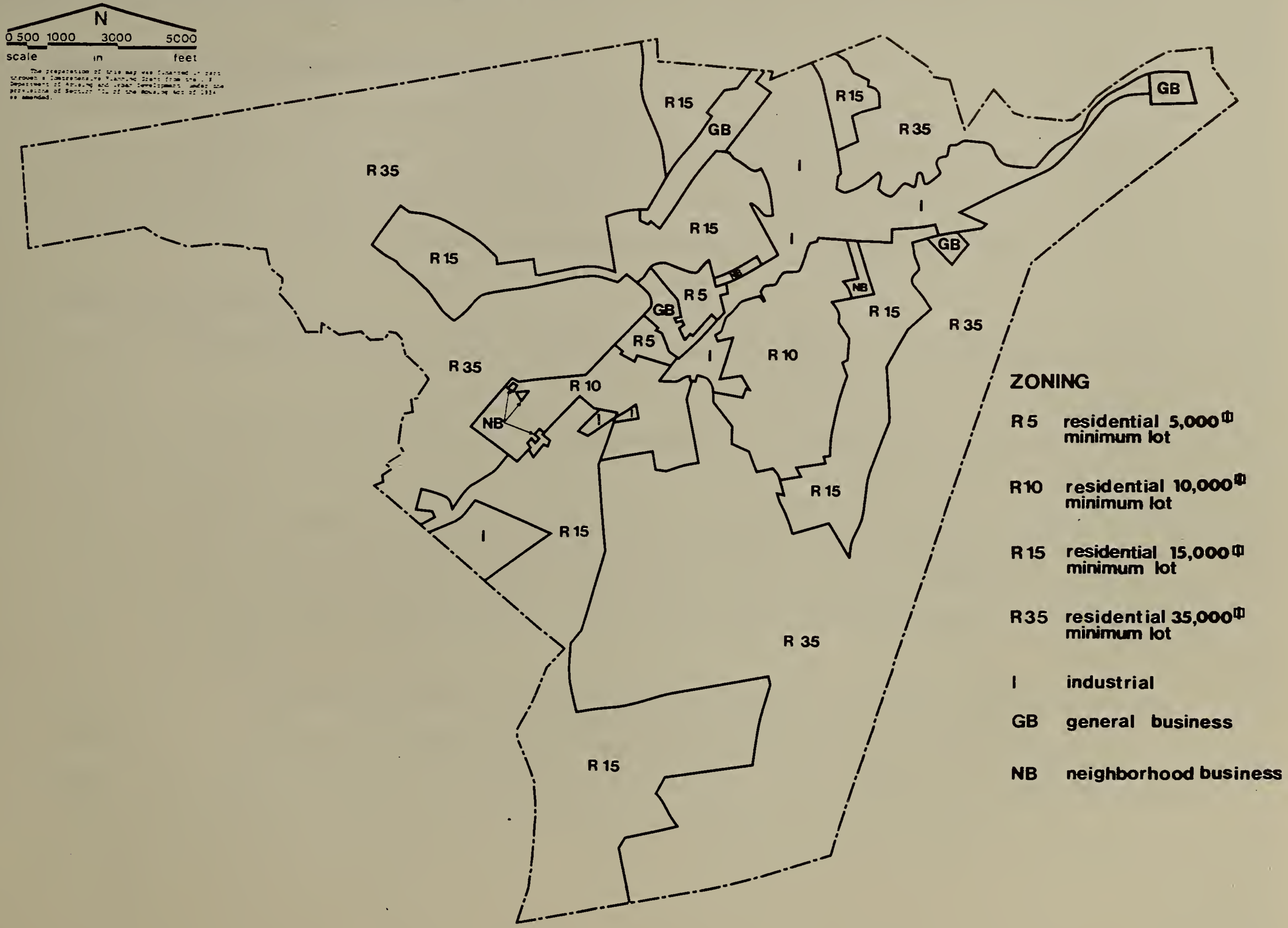

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POPULATION DISTRIBUTION OVERLAY

One of the first steps in community planning is to identify where people live. This helps to determine the need for new or expanded community services (such as schools and utilities). Population distribution is shown by placing "dots", each representing a predetermined number of people, on an overlay of the base map.

Making the Overlay

- Obtain a population count for the community from the most recent decennial Federal Census.
- Obtain the number of housing units in the community from the most recent decennial Federal Census.
- Using these two figures, derive the number of occupants per dwelling unit.
- At this point, obtain the most recent population count for the community. This might be the decennial Federal census, the State census (taken every five years), or a local census.
- Based upon the number of people per dwelling unit, and the number of people in the community, determine the number to be represented by each dot. Generally, use a whole number that is easy to work with. For example, in a community of 10,000 people with 2.5 persons per dwelling unit, it might be decided to have each dot represent 10 persons (1 per 4 dwelling units).

- Locate these dots on a work sheet. The U.S.G.S. maps, which show individual houses as black squares, and the findings of the fieldcheck should serve as guides for general placement of dots. Where individual houses are not shown (urbanized areas are shown in pink on U.S.G.S. maps), that portion that is known to be residential can simply be shown as one continuous mass of population concentration. Ideally, where density is high, the dots will be so closely clustered that they will begin to form a dark mass.
- Transfer the information to an overlay of the base map.

Easthampton Study

The 1975 population of Easthampton was 15,084. The Town developed as one of many subcenters in its region, with most activities taking place in the vicinity of the present Town center. Housing for those involved in local manufacturing and commercial activities was closely grouped to permit employees to be near their place of work. After the build-up of the center, lower density residential development spread outward along existing roadways. As these areas became saturated, new roads were cut into vacant or agricultural land, creating new residential neighborhoods. Over the past twenty years, urban land area has doubled because of recent intense subdivision for homes, particularly in the southwest portion of the Town.

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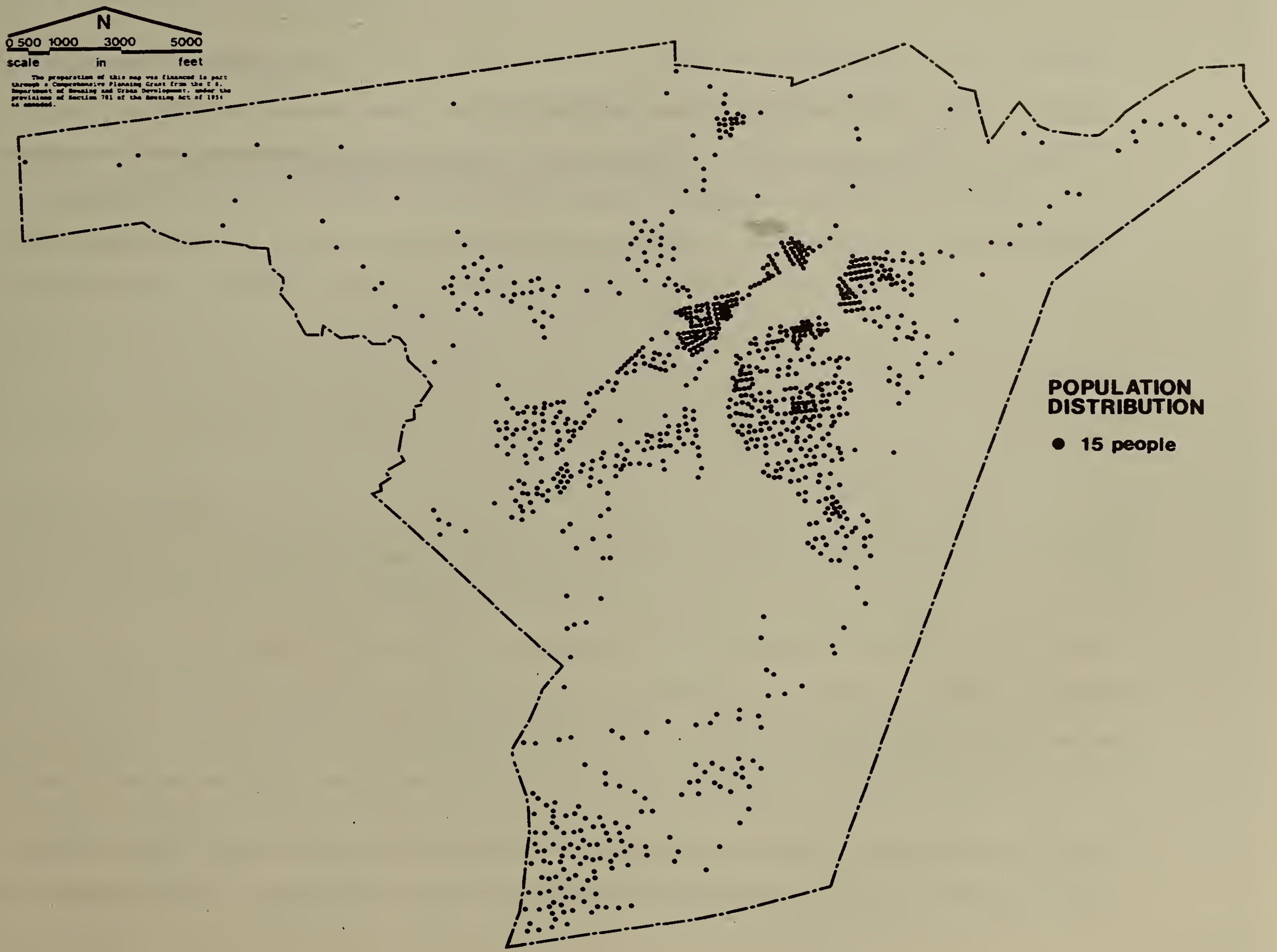

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Sources for the Easthampton Study

U.S.G.S. maps covering the Town of Easthampton.

Metcalf and Eddy, Inc. *Master Plan for the Town of Easthampton, Mass.* Prepared for the Easthampton Planning Board and the Massachusetts Department of Community Affairs. Boston: Metcalf and Eddy, 1971.

Fieldcheck.

CIRCULATION OVERLAY

It is important to identify and analyze both existing and potential problem areas concerning street patterns and traffic circulation. New developments may result in sudden and heavy traffic loads on an already congested circulation system. Careful planning can help avoid such dangerous and congested situations which will affect both public safety and the quality of life.

This overlay pinpoints existing circulation problems and sites where accidents occur. It may be used together with road design information to obtain a better understanding of existing routes and to survey for obvious trouble spots noting places where improvements may be necessary. Combined with other information such as population distribution and the location of residential, commercial, and industrial lands, an efficient circulation system could be developed.

Making the Overlay

- The chief traffic official may already have a map indicating congested roadways and accident prone points in the community. If so, transfer this information to an overlay of the base map.
- If such a map is not available, accident information is available from the police department, local newspapers, and the Federally funded Traffic Operations Program

To Increase Capacity and Safety (TOPICS).

- Indicate congested areas, and those locations where accidents have occurred on an overlay of the base map.
- Fieldcheck.
- Some communities may wish to map additional information concerning road widths, parking areas, traffic counts, carrying capacities of roads and highways, and other roadway design criteria. They should consult the local Department of Public Works, the Massachusetts Department of Public Works, Bureau of Transportation Planning and Development, and publications that contain such information.

Easthampton Study

Developed in the nineteenth and early twentieth centuries, Easthampton's circulation pattern was built to accommodate transportation needs very different from those of the present. With rapid changes in transportation technology over the past fifty years, the Town today has street patterns not designed to cope with current demands. Easthampton's present circulation problem is the result of a system of very narrow streets compounded by considerable unrestricted parking.

A Federal TOPICS plan was completed for Easthampton in 1972. This program, which was administered by the Massachusetts Department of Public Works, attempted to in-

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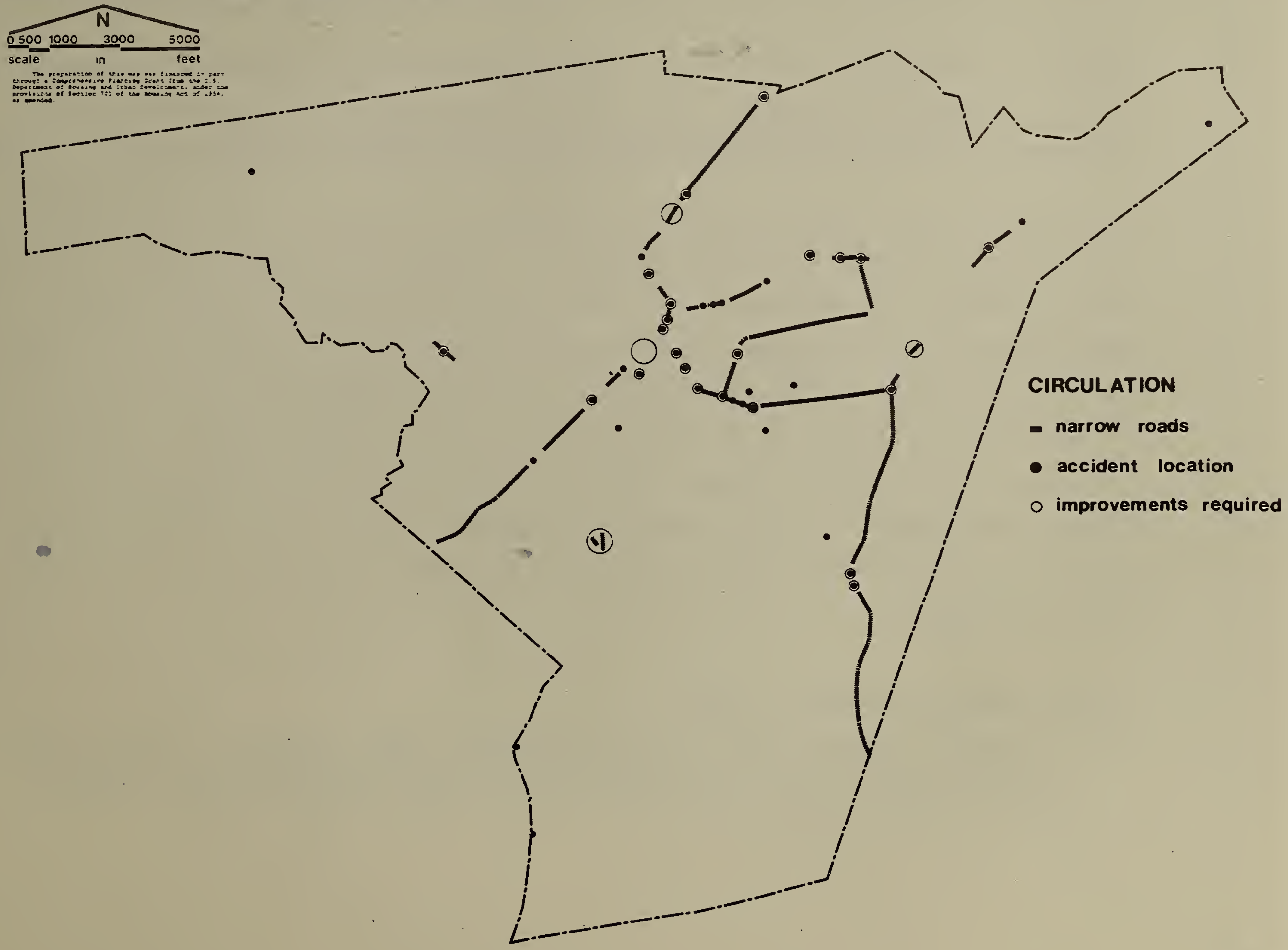

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crease the operational efficiency and improve the safety of streets by applying traffic engineering principles. The overall intent was to obtain optimum use of existing facilities. This program was recently replaced by the Urban Systems Program.

As the TOPICS Plan noted, several of the streets in the Town's central business area (such as Union Street and Cottage Street) are narrow with parking permitted on both sides. Adding to the problem is the fact that it is difficult to drive north or south through the Town without passing through the center. In addition, the steep slopes of the Mount Tom Reservation severely restrict road extension to the east, and traffic traveling eastward is limited to using East Street or Route 141 (Mountain Road) with its steep grades. Existing rights-of-way are inadequate for proper expansion and many of the Town's intersections have serious sight-distance and channelization problems. Other problems include vertical alignment and at-grade railroad crossings.

Sources for the Easthampton Study

TOPICS Program. Areawide TOPICS Plan, Easthampton, Mass. Area No. 7. Prepared for the Commonwealth of Massachusetts, Department of Public Works in cooperation with the U.S. Department of Transportation, Federal Highway Administration. Boston: Edwards and Kelcey, Inc. October, 1972.

Chief of Police, Town of Easthampton, Mass.

Metcalf and Eddy, Inc. *Master Plan for the Town of Easthampton, Mass*. Prepared for the Easthampton Planning Board and the Massachusetts Department of Community Affairs. Boston: Metcalf and Eddy, 1971.

Fieldcheck.

SCHOOLS OVERLAY

The importance of adequate school facilities should be apparent to any community. New development may result in sudden and heavy student loads on an already crowded school system. Careful planning can help avoid such situations which are expensive to correct.

This overlay, when combined with the population distribution and existing land-use overlays, can indicate where people are located, where land is available for development, and where these occur in relation to existing school facilities.

Making the Overlay

- If a map exists showing school location and school district boundaries, take that information and transfer it to an overlay of the base map.
- If such a map is not available, a community map or a U.S.G.S. map may be used to determine school location.
- For information on school boundaries, enrollment, and school capacity, contact the School Department. It should be noted that computing school capacity in the traditional manner (based upon square footage, number of classrooms, etc.) may no longer be applicable, for educational programs such as those under Chapter 766 require

specialized spaces.

·On the overlay, use a fraction $\left(\frac{\text{enrollment}}{\text{capacity}}\right)$ to indicate current enrollment and its capacity as stated by the school department.

Easthampton Study

The majority of school districts in Massachusetts and New England are experiencing declining enrollments. Easthampton has been an exception to this trend in the past, and apparently will continue to be so in the future. The overall outlook is for gradual but consistent enrollment increases.

Home construction, particularly in the last decade, has resulted in the in-migration of new families to Easthampton, especially to the western and southwestern portions of the Town. It is evident, from enrollment increases from one year to the next, that these families have children of school age.

The present grade arrangement in the public schools is K-4, 5-8, and 9-12. As of October 1, 1976, the total enrollment was 2,883 pupils. Student allocations for the four elementary schools are changed annually in order to make the best possible use of existing classroom space and educational needs. The White Brook Middle School, the newest facility in the school system, opened in 1975 to house grades 5-8.

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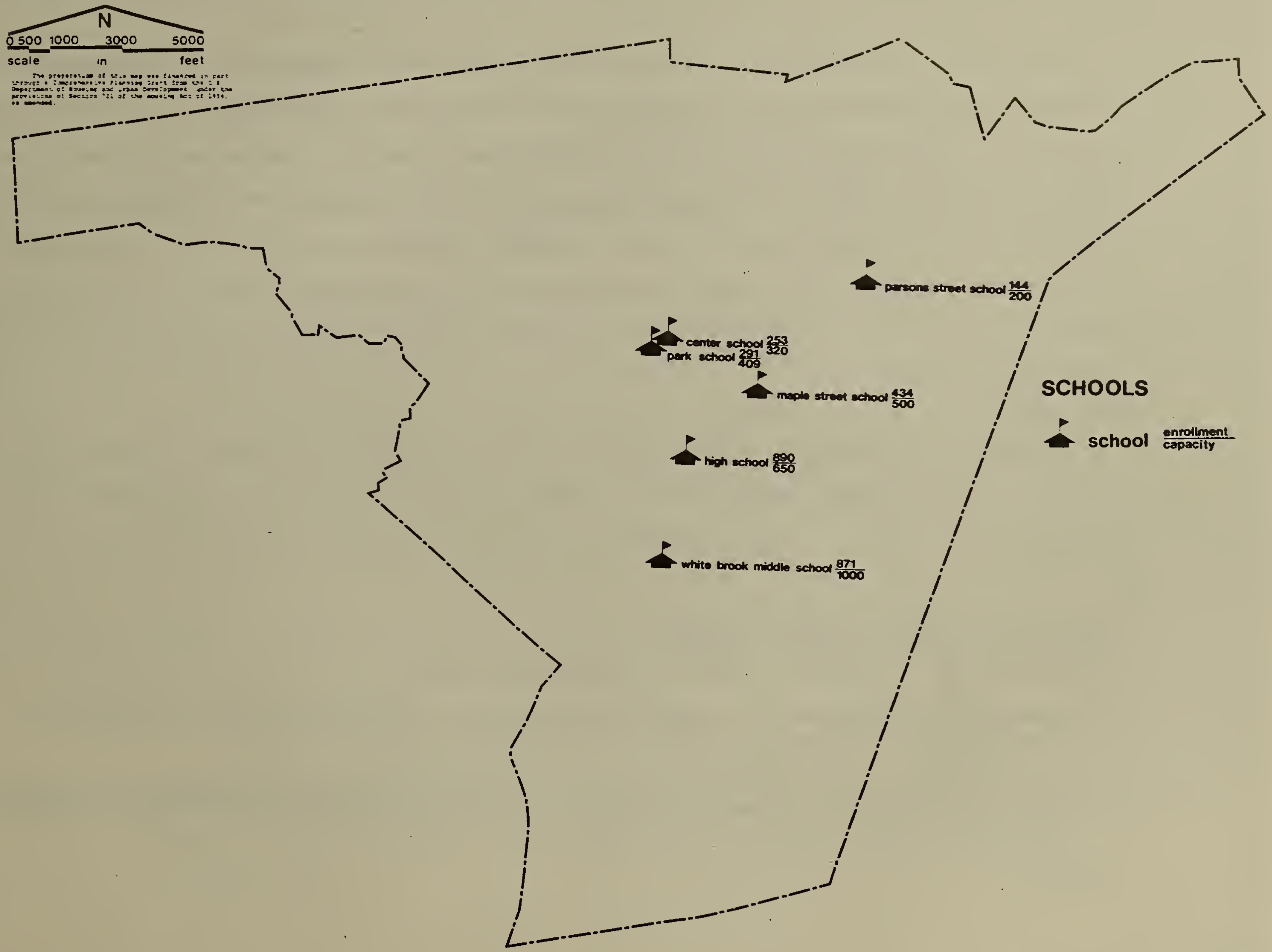
N
0 500 1000 3000 5000
scale in feet
parsons street school $\frac{144}{200}$
center school $\frac{253}{320}$
park school $\frac{291}{409}$
maple street school $\frac{434}{500}$
high school $\frac{890}{650}$
white brook middle school $\frac{871}{1000}$
SCHOOLS
school $\frac{\text{enrollment}}{\text{capacity}}$

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Its capacity is 1,000 students and the enrollment as of October 1, 1976 was 905 students. The opening of this school did alleviate to some degree the overcrowded conditions previously existing at the elementary schools. The present high school (which had an enrollment of 890 students on October 1, 1976) was designed for 650 students. The staggered, nine period extended schedule for 1976-1977, while not alleviating problems associated with space and overcrowding, has provided greater flexibility in the selection of course options without necessitating extra classroom space.

In addition to the public school system, there are several private schools in the region. Over the past several years, these schools have had declining enrollment causing some to close, thereby adding students to the public system.

Sources for the Easthampton Study

Superintendent of Schools, Town of Easthampton, Mass.

Easthampton, Massachusetts. Annual Report of the Town Officers of the Town of Easthampton for the Year Ending December 31, 1976.

Metcalf and Eddy, Inc. Master Plan for the Town of Easthampton, Mass. Prepared for the Easthampton Planning Board and the Massachusetts Department of Community Affairs. Boston: Metcalf and Eddy, Inc. 1971.

Fieldcheck.

FIRE SERVICE OVERLAY

The aims of any community's fire service are to provide good coverage of the area to be protected and quick response to fire alarms or other emergency calls. One cannot measure in dollars the subconscious feeling of safety that a good fire service provides.

The location of fire stations and equipment will depend upon the needs of a community. If a community is geographically divided into two or more sections by rivers or mountains; or by any man-made barriers such as at-grade railroad crossings, additional stations might be necessary. On the other hand, if efficient equipment is utilized and the required fire flow is available, the trend currently is to allow increased distances from a fire station to its service area.

Combined with existing land-use, water supply, population distribution, and circulation overlays, the fire service presently provided may be evaluated, and plans may be made to meet future demands.

Making the Overlay

If a fire insurance classification map is available, transfer that information to an overlay of the base map.

- If not, locate the fire station on a community map.
- Highlight those sections of any roadways which are more than three miles from the fire station by the most commonly used routes.
- Contact the fire department for information on areas with inadequate hydrant water pressure and for areas that are particularly difficult to reach.
- Transfer this information to an overlay of the base map.

Easthampton Study

According to suggested standards of the American Insurance Association (formerly the National Board of Fire Underwriters), a town such as Easthampton should be able to handle two simultaneous fires of moderate intensity that might occur in commercial and industrial districts or institutions such as churches, schools, and hospitals.

Presently, Easthampton has one fire station, located in the center of the Town. While the fire department equipment meets the suggested standards (one ladder company and three pumper companies), the station location is in a congested area of the Town. Adjacent to an at-grade railroad crossing and a dangerous intersection, delays in transit may result in a delayed response to fire or other emergency calls.

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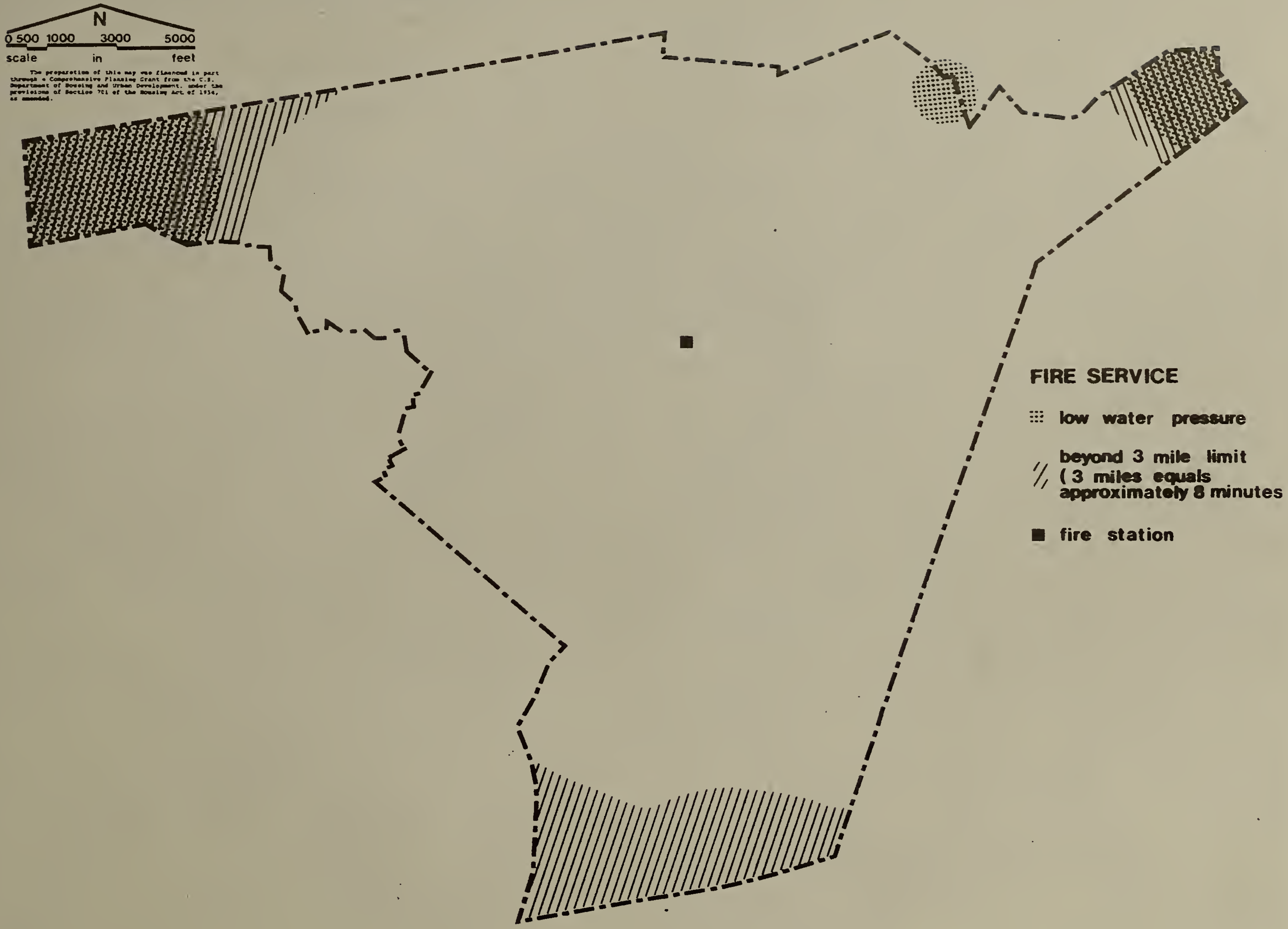

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Fire service may also be constrained in the extreme northeastern and northwestern portions of the Town where hydrant water pressure is inadequate. In addition, these areas and much of the Plains section in the southwest corner of the Town are more than three miles away from the fire station by most common routes. A new sub-station to serve the Plains section is being considered.

Sources for the Easthampton Study

Chief of the Fire Department, Town of Easthampton, Mass.

Insurance Services Office, 3 Center Plaza, Boston, Mass.

Easthampton, Massachusetts. Annual Report of the Town Officers of the Town of Easthampton, for the Year Ending December 31, 1976.

Goodman, William E. ed. Principles and Practice of Urban Planning. Washington, D.C.: International City Managers' Association, 1968.

De Chiara, Joseph and Koppelman, Lee. Planning Design Criteria. 2d. Ed. New York: Van Nostrand Reinhold Co., 1975.

WATER SERVICE OVERLAY

Areas where water pressure is inadequate for fire protection and household use may not be as attractive for development as areas with an adequate water supply already in existence.

Some communities or areas within a community may rely largely upon private on-site wells. When too many wells are placed too closely together, withdrawal may exceed recharge thereby depleting groundwater supply. As a result, depth to the ground water supply may be so great as to make drilling for on-site wells extremely expensive.

This overlay identifies those areas that are not supplied with municipal water service. The assumption is that any area further than 400 feet from an existing waterline falls within this category. Such information can influence new development to locate in or near areas where water service is already provided. This overlay may also serve to identify and protect recharge areas.

Making the Overlay

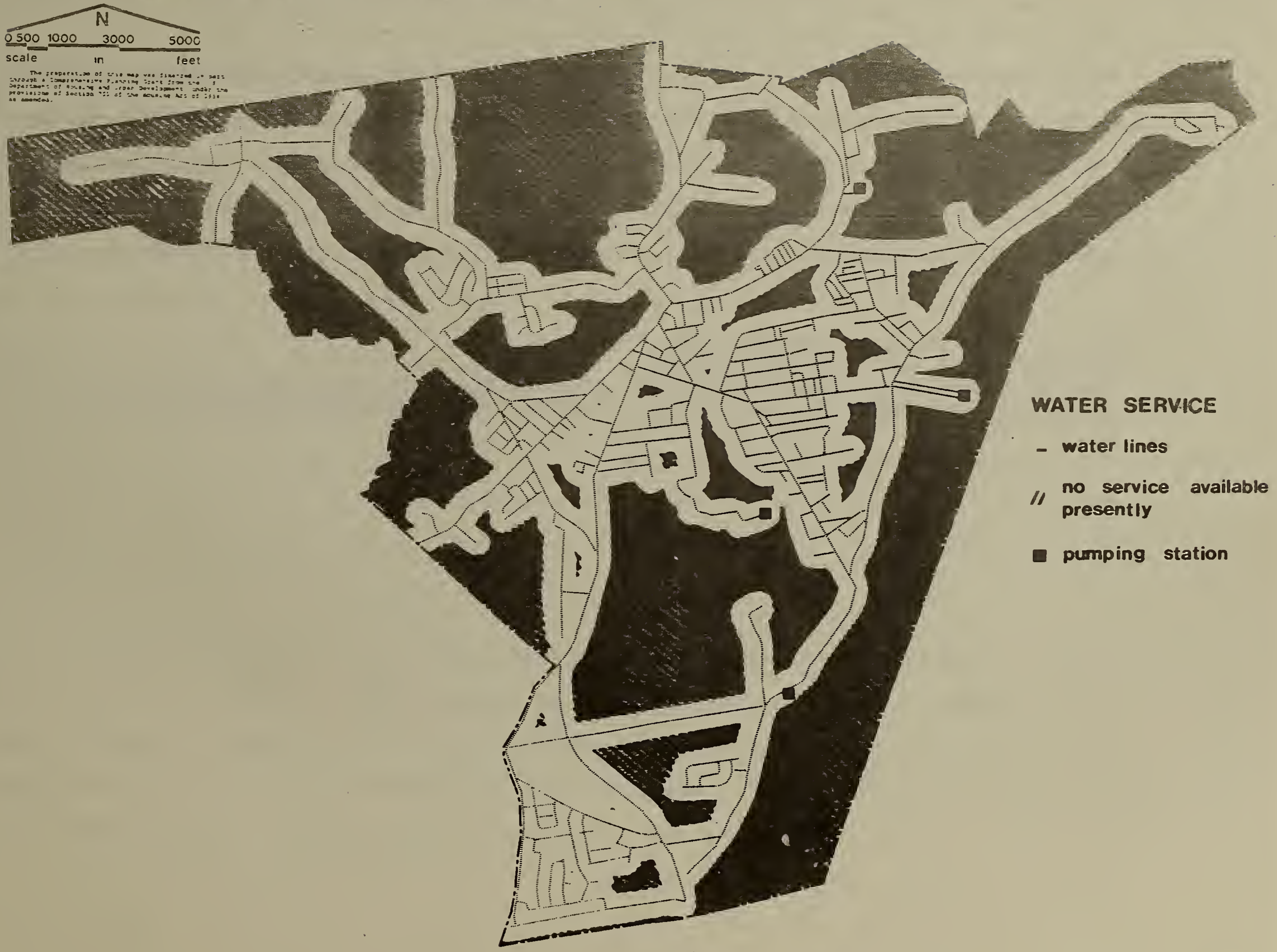
- If a map of the community water service system exists, transfer that information to a work sheet.

- If such service exists, but there is no map of the system, obtain the information from the Municipal Engineer, Water Commissioner, Public Works Department, or water company and transfer it to a work sheet.
- Locate sources of water supply (these may include well fields, reservoirs, etc.) and determine any existing or potential problem areas in the system. For this information, consult the relevant official. Transfer the information to the work sheet.
- Consult the community's subdivision regulations for distance requirements concerning connections to existing water mains. Using that figure, draw the relevant distance from each water line on the work sheet. If no figure is given, conform to the practices of the community with the assistance of the relevant officials.
- For those communities or areas within a community which are not provided with water sercice and which rely upon on-site wells, it is necessary to determine if there are any unsuitable areas. Information may be available from local officials, well contractors, or building contractors.
- When the pertinent information has been obtained, transfer it to an overlay of the base map.

Easthampton Study

More than 90% of the population of Easthampton obtains its water supply from groundwater sources within the Town. Presently, the safe yield of the system is over 7.5

EASTHAMPTON, MASSACHUSETTS



The preparation of this map was financed in part through a Comprehensive Planning Grant from the Department of Housing and Urban Development under the provisions of Section 701 of the Housing Act of 1954 as amended.

million gallons per day. In 1975, approximately 3 million gallons were pumped daily. Easthampton's well supply is considered to be more than adequate for anticipated demand through at least 1990. However, it should be noted that low pressure problem areas do exist at the ends of water mains, primarily in the extreme northwestern and northeastern portions of the Town.

Sources for the Easthampton Study

Town of Easthampton, Massachusetts. Plan of Water Distribution System, Holyoke: Tighe and Bond, Engineers, 1972 (Revised 1973). (Map scale 1" = 1,000')

SEWER SERVICE OVERLAY

As with water supply, the existence of an adequate sewerage system may make an area more attractive for development. However, new development may result in sudden and heavy sewage loads on an already congested system. If the community decides to improve or extend the existing sewer lines, such action will result in increased costs to the community.

Some communities, or areas within a community, may rely largely on septic systems for wastewater disposal. When septic systems are placed in soils with inadequate drainage capabilities, or when they are too numerous for the land to handle, they contribute to the deterioration of both surface and ground water quality. For this reason, an understanding of soil characteristics is important in determining the suitability of land for possible development.

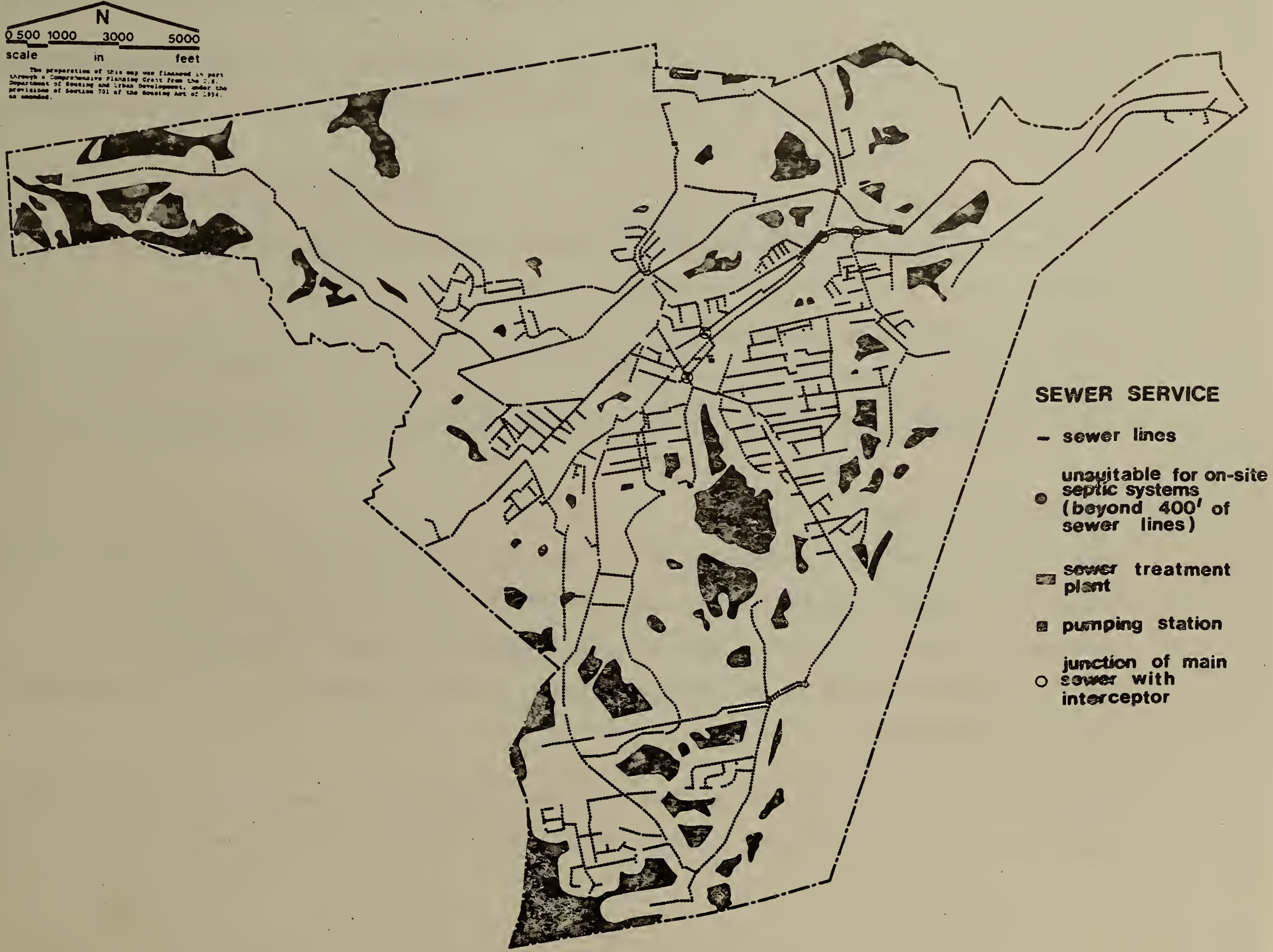
This overlay identifies those areas which are unsewered and unsuitable for on-site septic disposal systems. Some areas, even though they are shown as being unsuitable for on-site septic systems, may in fact be capable of accepting such systems provided that lot size is greater than one-half acre. In any case, in order to make this determination, on-site percolation tests are required.

For those communities which depend upon on-site septic disposal systems, a map of this kind may be extremely useful as an aid in preparing residential zoning densities.

Making the Overlay

- If the community is sewered and has a map of the system, transfer the information to a work sheet.
- If no map exists, obtain the information from the Municipal Engineer, Sewer Commissioner, or Public Works Department and transfer it to a work sheet.
- Determine any existing or potential problem areas in the system from the appropriate local officials and indicate any such areas on the work sheet.
- Consult the local subdivision regulations for distance requirements for connections and draw that distance from each sewer line on the work sheet. Otherwise, draw the distance which conforms to local practices (with the assistance of local officials).
- For those communities or areas within a community which rely upon on-site septic systems, it is necessary to determine if there are areas which have limitations for such systems. If available, examine the Soil Conservation Service (SCS) intepretive maps for any areas with either severe or moderate limitations for on-site septic systems (these classifications assume house lots of one-half acre or smaller). Indicate those areas on the work sheet.

EASTHAMPTON, MASSACHUSETTS


N
0 500 1000 3000 5000
scale in feet
SEWER SERVICE
▬ sewer lines
● unsuitable for on-site septic systems (beyond 400′ of sewer lines)
▨ sewer treatment plant
■ pumping station
○ junction of main sewer with interceptor

The preparation of this map was financed in part through a Comprehensive Planning Grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

- If a soil survey has been completed, but no interpretive work has been undertaken, it is possible to prepare an interpretation by using the soil series descriptions and detailed soil maps available from SCS.
- If no SCS materials are available, use wetland information, slope information, and information available from the Public Works Department, Municipal Engineer, Board of Health, sewer contractors, or private individuals.
- Transfer this information to a work sheet.
- Transfer those areas which are beyond the local sewer connection distance and which are not suitable for on-site septic systems to an overlay of the base map.

Easthampton Study

Most of Easthampton is provided with a public sewerage service. The system connects with a secondary treatment plant from which the effluent is discharged to the Connecticut River. The Town's subdivision regulations make it mandatory to connect all lots in a subdivision to the public system, if that system is located within 400 feet of the subdivision.

There are some sections in the Town, beyond anticipated areas of sewerage service, where on-site systems might be utilized. Areas where unstable soils may pose constraints for septic systems occur mainly along the Mount Tom ridge, in the northern areas of the Town, and in the floodplains of the rivers and streams.

Sources for the Easthampton Study

Town of Easthampton, Massachusetts. Sanitary Sewer System, Master Plan. Holyoke: Tighe and Bond Engineers, 1972. (Map scale 1" = 1,000')

Town Engineer, Town of Easthampton, Massachusetts

Town of Easthampton, Massachusetts. Planning Board Rules and Regulations Governing the Subdivision of Land. Easthampton: undated.

United States Department of Agriculture, Soil Conservation Service Hampshire County, Mass. Advance Soil Survey, November 1976. (Map scale 1" = 1,320')

DRAINAGE OVERLAY

Runoff is an important factor in soil erosion and can create serious engineering and agricultural problems. Buildings, roads, and parking lots decrease the area available for infiltration of rainfall and can cause large concentrations of runoff water. If paved and roofed surfaces are planned in areas of soils having high or very high runoff, special care should be taken to insure that the increased concentration of runoff water be controlled and not cause damage to private property or municipal facilities.

This overlay indicates areas that may be susceptible to erosion from surface runoff. Control measures such as landscaping, regrading, planting, and engineering practices such as curbing, gutters, storm drains, and retention basins should be incorporated in any development scheme for such areas.

Making the Overlay

If available, examine the SCS interpretation maps for those areas with high or very high rates of surface runoff. Transfer those areas to an overlay of the base map.

- If a soil survey has been completed, but no interpretive work has been undertaken, by using the detailed soil maps and soil series descriptions that are available from SCS, it is possible to prepare an interpretation. Transfer the information to an overlay of the base map.
- In either case, areas in the "Urban Land" category (which SCS does not classify) may be included on the overlay as being prone to runoff.
- If no SCS materials are available, consult local officials for information on problems associated with runoff (such as cellar flooding and erosion) and transfer this information to an overlay of the base map.

Easthampton Study

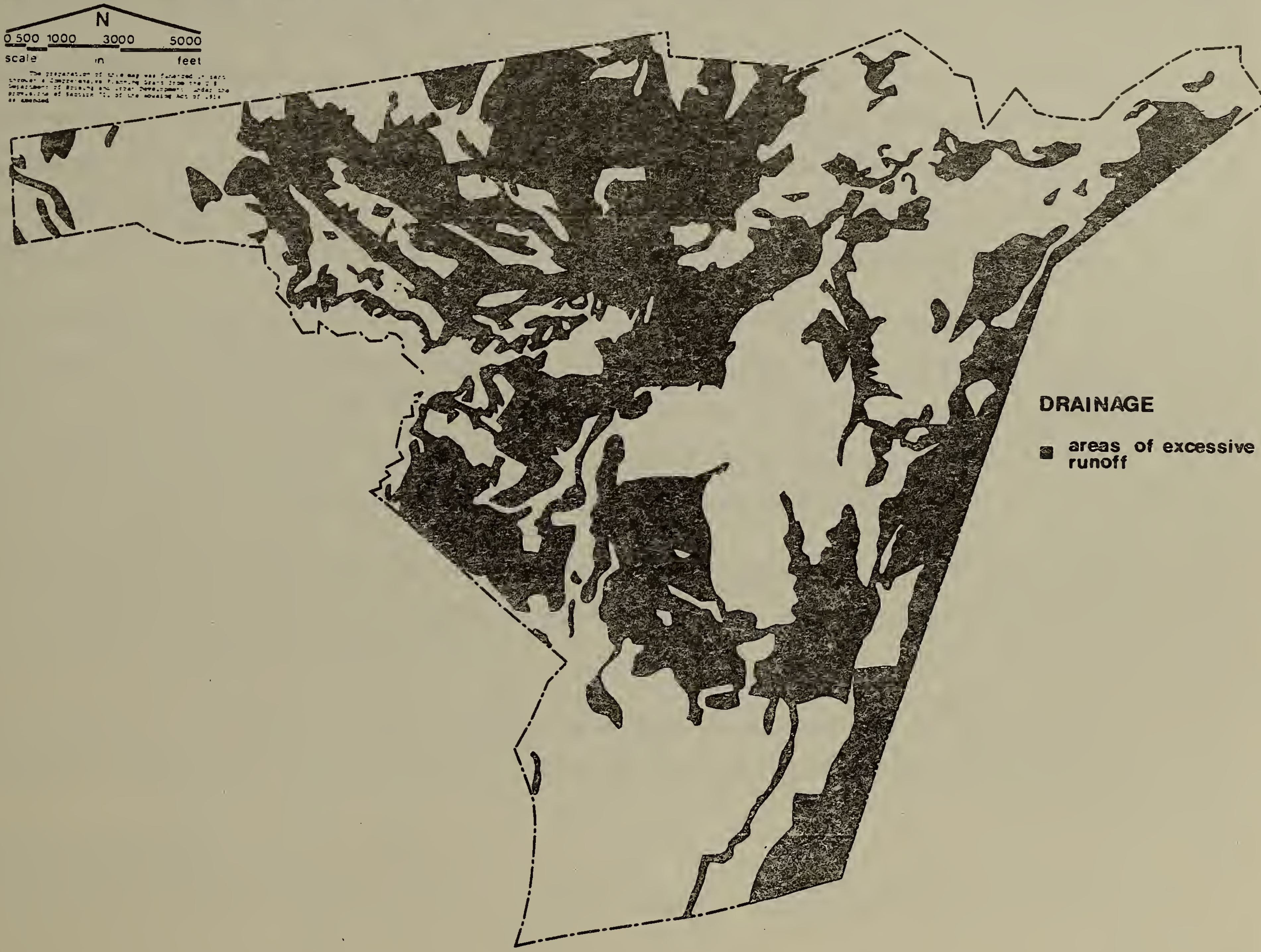
Many sections in the Town are subject to problems associated with runoff. Such areas require control measures which might be quite costly.

Sources for the Easthampton Study

United States Department of Agriculture, Soil Conservation Service. Hampshire County, Mass. Advance Soil Survey, November 1976. (Map scale 1" = 1,320")

Town Engineer, Town of Easthampton, Massachusetts.

EASTHAMPTON, MASSACHUSETTS



The preparation of this map was financed in part through a Comprehensive Planning Grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954 as amended.

WETLANDS OVERLAY

Wetlands, until recently, have been regarded as waste areas and were drained or filled at will. Only over the past few years has the public become aware, with increased support from the courts, of the value of freshwater wetlands for water supply, flood control, recreation, open space conservation, and wildlife habitat.

The Wetlands Protection Act of 1972 (Mass. G.L. Ch. 131, Sec. 40, as amended), regulates the filling, dredging or altering of inland and coastal wetlands, river banks, ocean shorelines, beaches, tidal flats, and salt meadows. Under the Statute, any developer or government agency wishing to alter any such areas within the State must first receive approval from the local Conservation Commission.

This overlay, when combined with the existing land-use overlay, may indicate areas where wetland laws could be violated, or where increased construction costs could occur due to the nature of the land.

The advantage of mapping wetlands from as many sources as possible is that it affords the opportunity to anticipate any problems prior to submitting a proposal.

Making the Overlay

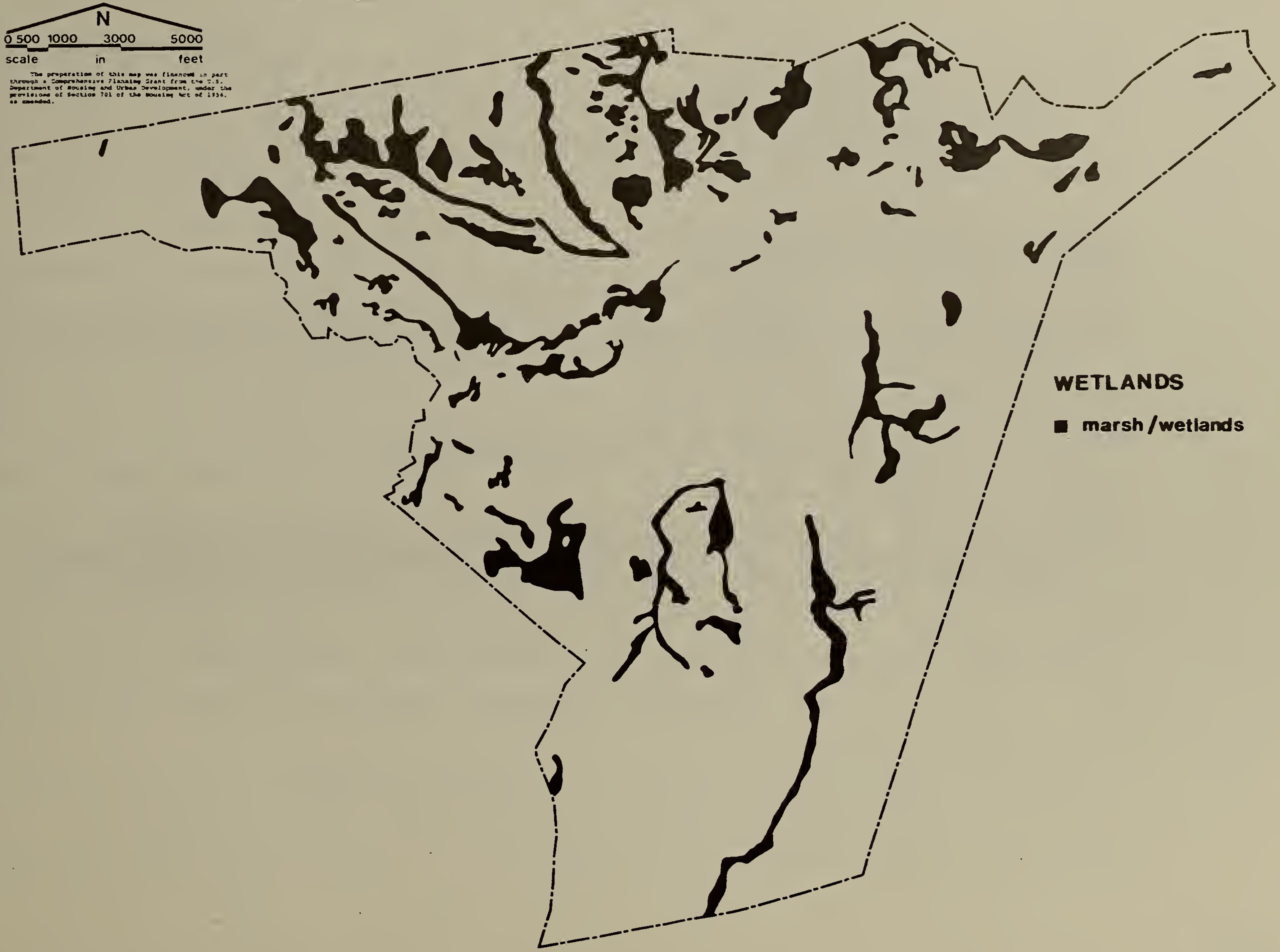
- If the community has a map showing wetlands, transfer the information to a work sheet.

- U.S.G.S. maps can serve as a basic information source. On such maps, wetlands are described by the symbol .
- MacConnell maps, showing wetland areas, and SCS interpretive maps, showing areas with soils classified as "good" or "very good" for existing wetlands, can be used to refine U.S.G.S. data.
- If a soil survey has been completed, but no interpretive work has been undertaken, it is possible to prepare an interpretation by using the soil series descriptions in conjunction with aerial photographs available from SCS.
- Place the wetland information from all these sources onto a work sheet.
- Fieldcheck wetland boundaries in order to make any corrections and additions. The presence of water tolerant vegetation as specified in the Wetland Protection Act may be a most useful indicator. This check should occur in the springtime when the water table is highest.
- Transfer the relevant information to an overlay of the base map.

Easthampton Study

The wetland areas of Easthampton are formed by the floodplains of brooks coursing through the town into the Manhan River. They include on the north side, the North Branch, Hannon Brook, and Bassett's Brook. On the south, Wilton Brook, White Brook,

EASTHAMPTON, MASSACHUSETTS



The preparation of this map was financed in part through a Comprehensive Planning Grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

Broad Brook, and Brickyard Brook flow into a series of man-made ponds in the center of the Town. The Manhan River flows through the north-central portion of the Town, from west to east and drains into the Connecticut River at Mount Tom via the Oxbow.

Sources for the Easthampton Study

U.S.G.S. maps covering the Town of Easthampton.

MacConnell, William P. *Remote Sensing: 20 Years of Change in Hampshire County, Massachusetts. 1952-1972*.

Soil Conservation Service materials.

Chairman, Town of Easthampton Conservation Commission.

Town of Easthampton Planning Board.

Golet, Francis C. *Classification and Evaluation of Freshwater Wetlands in the Glaciated Northeast*. (Resource Publication Number 116). Washington, D.C.: United States Department of the Interior, Fish and Wildlife Service, 1974.

FLOODPLAINS OVERLAY

Areas which are subject to periodic inundation are called floodplains. Floods resulting from excess amounts of rainfall and melting snow, have occurred along Massachusetts' rivers and streams. Prior to man-made structures on the floodplain, few serious flood problems existed. However, as development of floodplain areas has increased, flood damages have also increased. Generally, a flood problem arises when a structure is located on a floodplain and is constructed at either too low an elevation or without regard to the resultant increase in flood stages upstream.

Often this initial development encourages additional construction on the floodplain which further reduces the floodplain capacity and increases flood levels. Subsequently, the general public is affected by the construction of streets and other public facilities and utilities in these areas which, when damaged by floods, are repaired at public expense. The public is also required to bear the costs of flood-fighting and rehabilitation. Ultimately, flood control works constructed at public expense may be required to protect floodplain occupants.

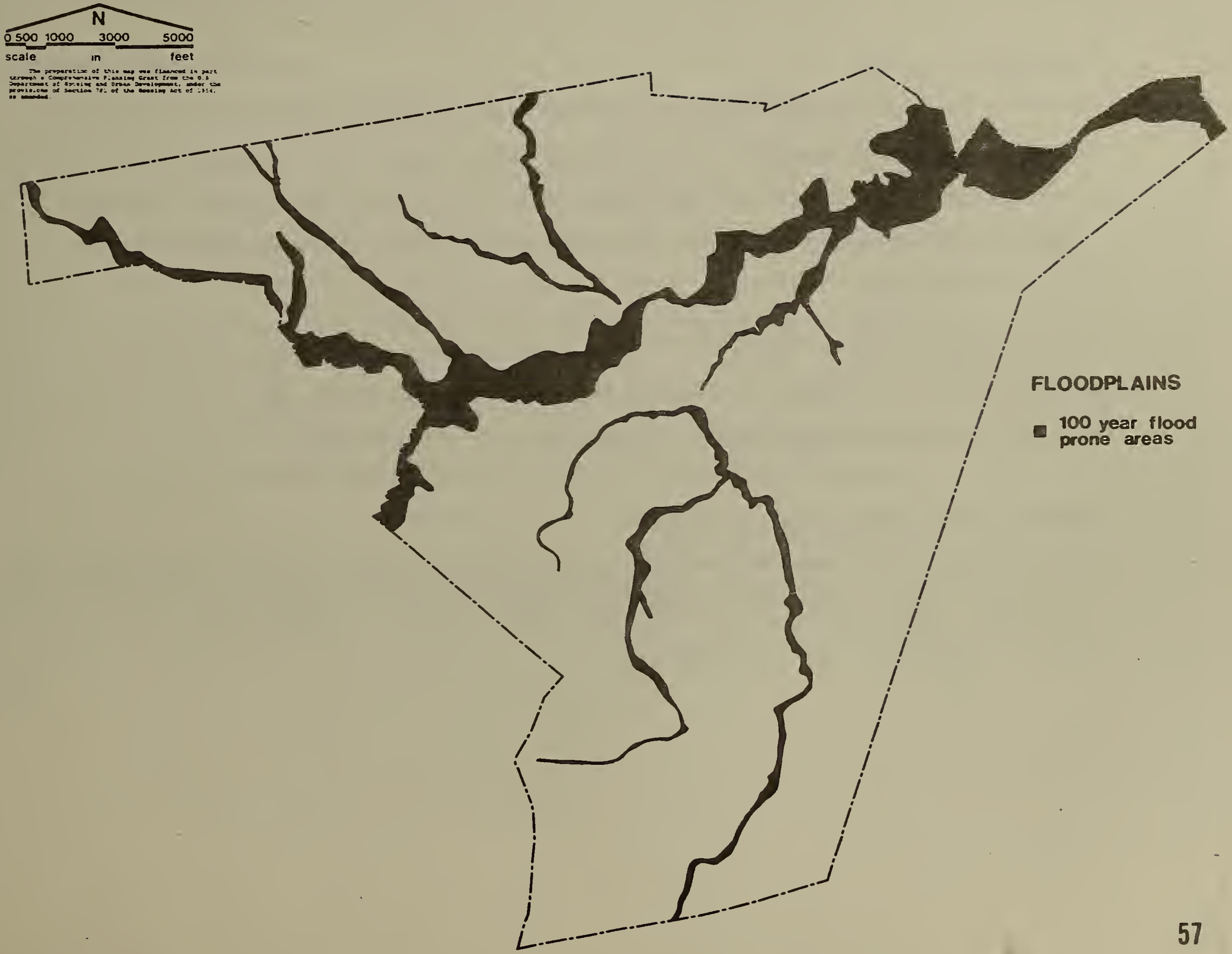
The National Flood Insurance Act of 1968 (P.L. 90-448) and the Federal Flood Disaster Protection Act of 1973 (P.L. 93-234) encourage floodplain zoning by mandating that, in order for a community to qualify for flood insurance, it must have adopted a floodplain bylaw. This program seeks to restrict development within flood prone areas.

In Massachusetts, the Zoning Act (G.L. Ch. 40A) specifically allows local zoning laws to provide that "lands subject to seasonal flooding not be used for residential, or any other purposes that would endanger the health or safety of the occupants." Floodplain zoning allows for protection of floodplains, including both inland and coastal wetlands and shoreline areas.

Making the Overlay

- Any community already involved in the Federal Housing and Urban Development (HUD) Flood Insurance Program has Flood Hazard Boundary maps for the program.
- Transfer those areas shown on the most recent revisions as flood prone onto an overlay of the base map.
- If no map is available, obtain historical information concerning flood elevations from the Army Corps of Engineers, local records, newspaper reports, and members of the community.
- Transfer this information onto an overlay of the base map.

EASTHAMPTON, MASSACHUSETTS



The preparation of this map was financed in part through a Comprehensive Planning Grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

Easthampton Study

The land lying along the Manhan River and major streams is subject to occasional flooding when heavy rains or rapid spring thaws occur. The feeder brooks in the Town are generally short with gradients that provide for fast runoff. However, flooding does occur in the low-lying areas, especially along the Broad Brook, as well as the Manhan River.

The Easthampton Planning Board is presently considering a flood zoning ordinance as a prelude to enrollment in the National Flood Insurance Program. The maps showing the special flood hazard areas have already been completed.

Sources for the Easthampton Study

United States Department of Housing and Urban Development, Federal Insurance Administration. Flood Hazard Boundary Map for Town of Easthampton, Hampshire County, Mass. January 14, 1977 revision. (Map scale 1" = 1,000')

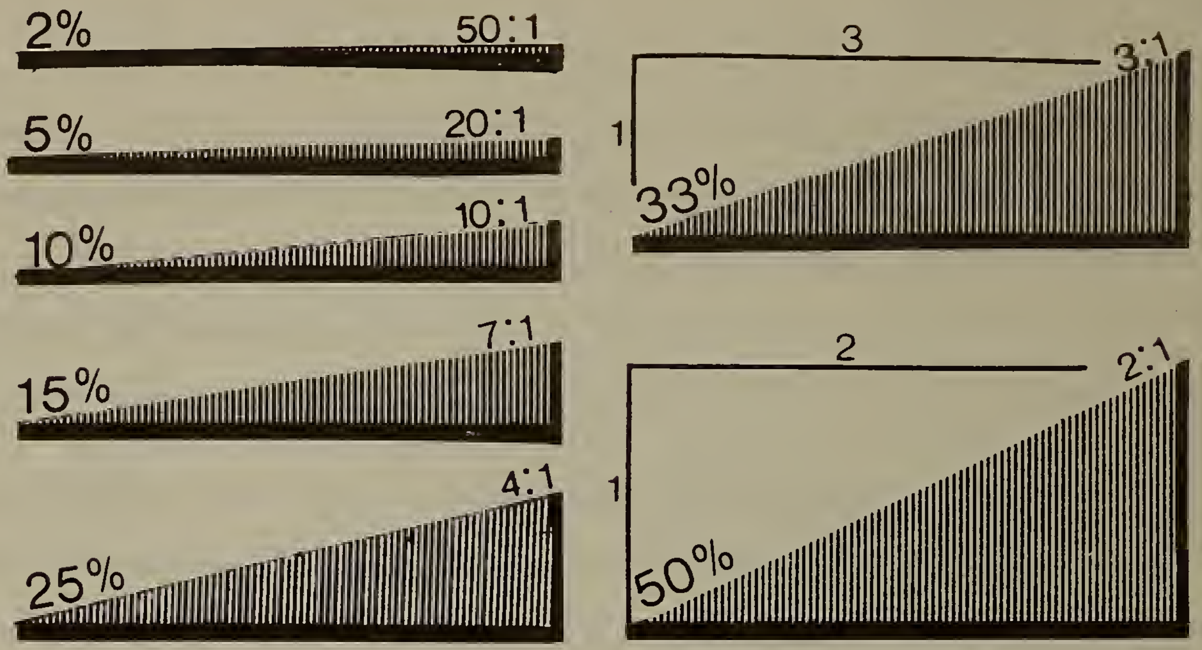
Town of Easthampton Planning Board.

STEEP SLOPE OVERLAY

A consideration of slope steepness is necessary for determining potential construction problems, as slope is a major factor affecting runoff and erosion. Generally, the steeper the slope, the more grading is required for development. Stabilization of steep slopes requires application of preventive or corrective measures. While grading, construction of retaining walls, and establishment of vegetation are effective in reducing runoff or erosion, such measures may be quite expensive.

Steep slopes may also create problems for septic systems. Sewage entering the soil too close to the slope might move too quickly to be adequately purified and may come to the surface, creating unsanitary conditions. Similarly, if bedrock occurs too close to the surface, or outcroppings exist, sewage may travel along shallow bedrock and through its fissures, coming to the surface before being adequately purified.

Percent slope, the vertical change in elevation over one hundred feet, may be measured by noting the elevation change over a given distance, as shown below:

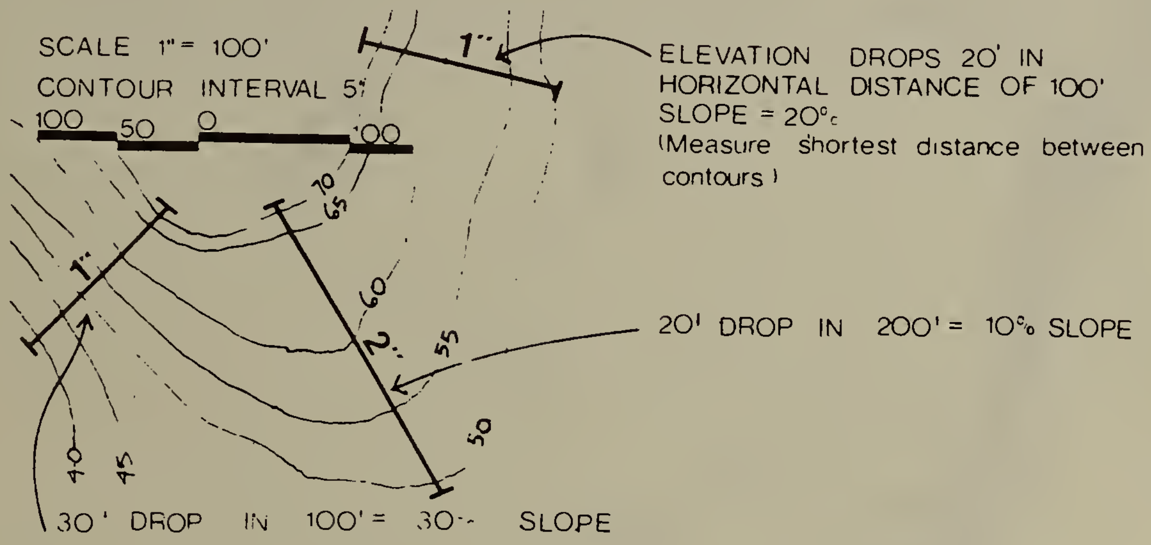


The Soil Conservation Service has indicated that slopes greater than 15% (that is, a vertical change of 15 feet per 100 feet of horizontal distance) are usually difficult and expensive to develop and are better suited for pasture, conservation, limited recreation, or wildlife preservation.

Some common standards for roadways suggest that streets in areas subject to severe winters have maximum slopes of 6-12%. Grades at intersections should be no greater than 2% and walkways no steeper than 5%.

Making the Overlay

- If a soils survey has been completed by SCS, it is possible to prepare a slopes interpretation from it. Those soil types coded D, E, or F should be highlighted as having steep slopes.
- Percent slope may be measured on a U.S.G.S. map by noting elevation change over a given distance. The closer together the contour lines, the steeper the slope. The simple guide below will help determine those areas where slopes are greater than 15%:


SCALE 1" = 100'
CONTOUR INTERVAL 5'
100
50
0
100
1"
ELEVATION DROPS 20' IN HORIZONTAL DISTANCE OF 100'
SLOPE = 20%
(Measure shortest distance between contours)
70
65
60
55
50
1"
2"
40
45
20' DROP IN 200' = 10% SLOPE
30' DROP IN 100' = 30% SLOPE

- Transfer the information onto an overlay of the base map.

Easthampton Study

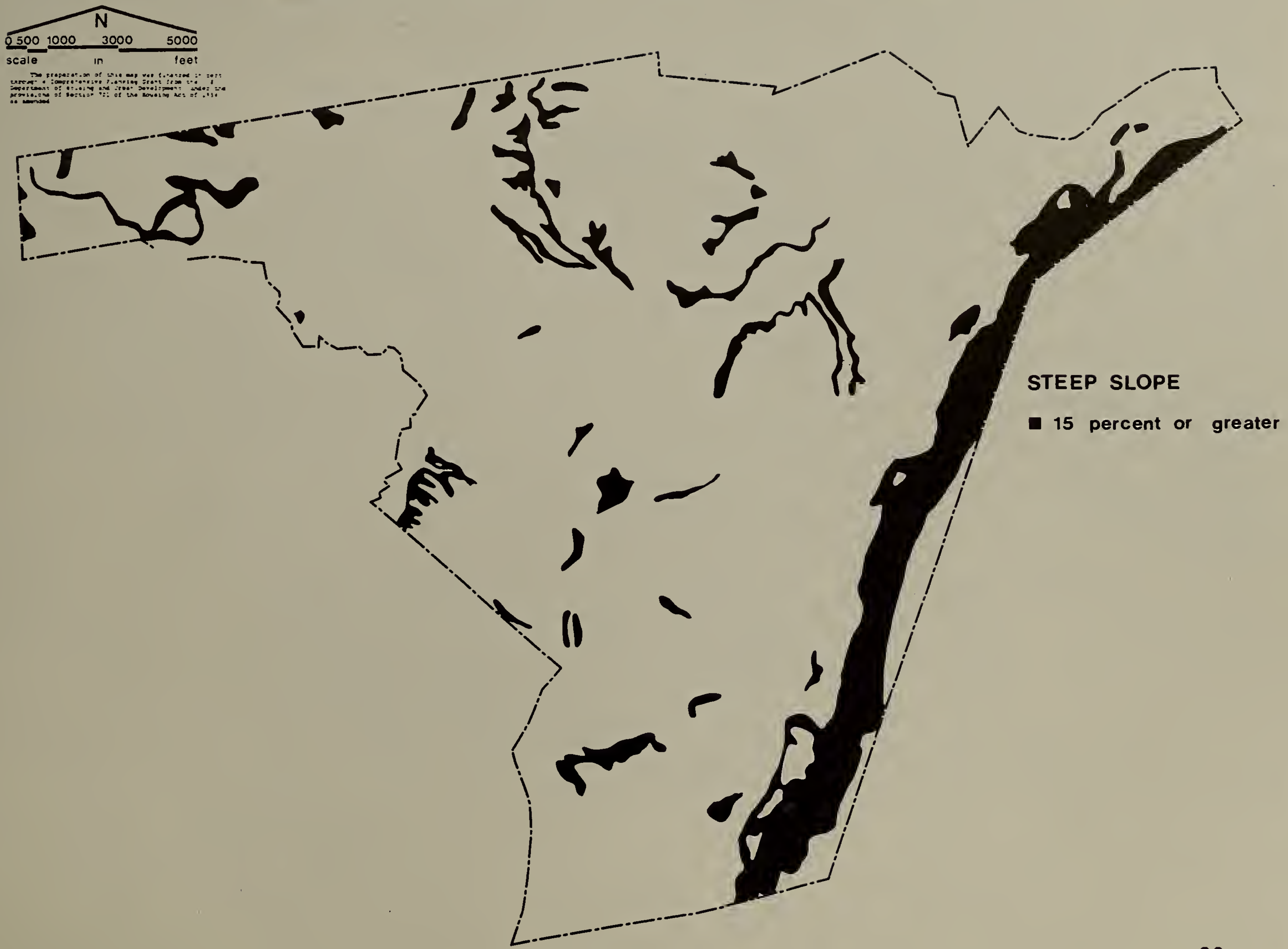
About one-fifth of Easthampton lands have a slope of over 15%. These areas occur mainly along the Mount Tom Range (which is also the only significant rocky area in the Town), and along the banks of streams and the shoreline of Lower Mill Pond.

Sources for the Easthampton Study

Soil Conservation Service materials.

Planning Services Group, Inc., Cambridge, Massachusetts. A Guide For Evaluating Development Proposals. Prepared for Central New Hampshire Regional Planning Commission in cooperation with Southern New Hampshire Regional Planning Commission and Nashua Regional Planning Commission. Cambridge: 1975.

EASTHAMPTON, MASSACHUSETTS



The preparation of this map was financed in part through a Comprehensive Planning Grant from the [illegible] Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954 as amended

RECREATION AND CONSERVATION OVERLAY

Existing public recreation and conservation lands are already protected and they provide a basic framework from which to build a larger recreation and open space network if desired.

When combined with other overlays, such as existing land use, population distribution, and school locations, this overlay may easily pinpoint areas of the community which are deficient in open space and recreation facilities, and where new facilities should be considered. Some communities may wish to consult standards for recreational activities in order to evaluate their own holdings. One such set of standards appears on the following page.

A. Standards for Recreational Activities

Type of Recreational Activity	Space Requirements for Activity Per Population	Ideal Size of Space Required for Activity	Recreational Area Wherein Activity May Be Located
Active Recreation			
1. Children's Play Area (with equipment)	0.5 acre/1.000 pop.	1 acre	Playgrounds Neighborhood Parks Community Parks. School Paygrounds
2. Field Play Areas for Young Children	1.5 acres/1,000 pop.	3 acres	Playgrounds Neighborhood Parks Community Parks
3 Older Children-Adult Field Sports Activities	1.5 acres/1.000 pop.	15 acres	Playfield-Community Park District Park
4. Tennis-Outdoor Basketball Other Court Sports	1.0 acres/5.000 pop.	2 acres	Playfield-Community Park
5. Swimming	1 outdoor pool/25.000	Competition size plus wading pool 2 acres	Playfield-Community Park
6. Major Boating Activities	100 acres/50.000	100 acres and over	District Park Regional Park or Reservation
7. Hiking Camping-Horseback Riding-Nature Study	10 acres/1.000 pop.	500–1 000 acres	Large District Park Regional Park
8. Golfing	1–18 hole course per 50,000 pop.	120 acres	Community Park-District Park
Passive Recreation			
1. Picnicking	4 acres/1 000 pop.	varies	All parks
2. Passive Water Sports Fishing-Rowing Canoeing	1 Lake or Lagoon per 25.000 pop.	20 acre water area	Community Park Special Regional Reservations
3. Zoos, Arboretums, Botanical Gardens	1 acre/1.000 pop.	100 acres	Large District Park or Special Facility
Other			
1 Parking at Recreational Areas	1 acre/1.000 pop	varies	Playfields Community District & Regional Parks
2 Indoor Recreation Centers	1 acre/10.000 pop	1–2 acres	Community Parks
3 Outdoor Theaters, Band Shells	1 acre/25.000 pop	5 acres	District Parks

B. Standards for Recreation Areas

Type of Area	Acres Per 1000 Population	Size of Site Ideal	 Minimum	Radius of Area Served
Playgrounds	1.5	4 acres	2 acres	0.5 miles
Neighborhood Parks	2.0	10	5	0.5
Playfields	1.5	15	10	1.5
Community Parks	3.5	100	40	2.0
District Parks	2.0	200	100	3.0
Regional Parks and Reservations	15.0	500–1,000	varies	10.0

Making the Overlay

- Obtain maps and information on recreation and conservation holdings from the local Park and Recreation Commission, the Planning Department, the Conservation Commission, or the State Department of Environmental Management, Office of Planning.
- Check the Municipal map or the Assessors' maps. The U.S.G.S. maps may identify playgrounds, parks, conservation, and some recreation areas.
- Consult with local officials and members of the community.
- Place the pertinent information on an overlay of the base map.

Easthampton Study

The Town of Easthampton has some areas that are set aside for both recreation and conservation purposes. These lands, shown in the following table, are either privately owned or belong to the Town or State.

RECREATION AND CONSERVATION AREAS IN EASTHAMPTON

ACTIVE

PRIVATE OWNERSHIP	AREA	LEVEL OF SERVICE
Williston Academy	65 acres	Tennis, swimming, field sports, ice hockey

PASSIVE

PRIVATE OWNERSHIP	AREA
Arcadia Sanctuary (Mass. Audubon)	50 acres
New England Forestry Assn.	110 "

RECREATION AND CONSERVATION AREAS IN EASTHAMPTON (continued)

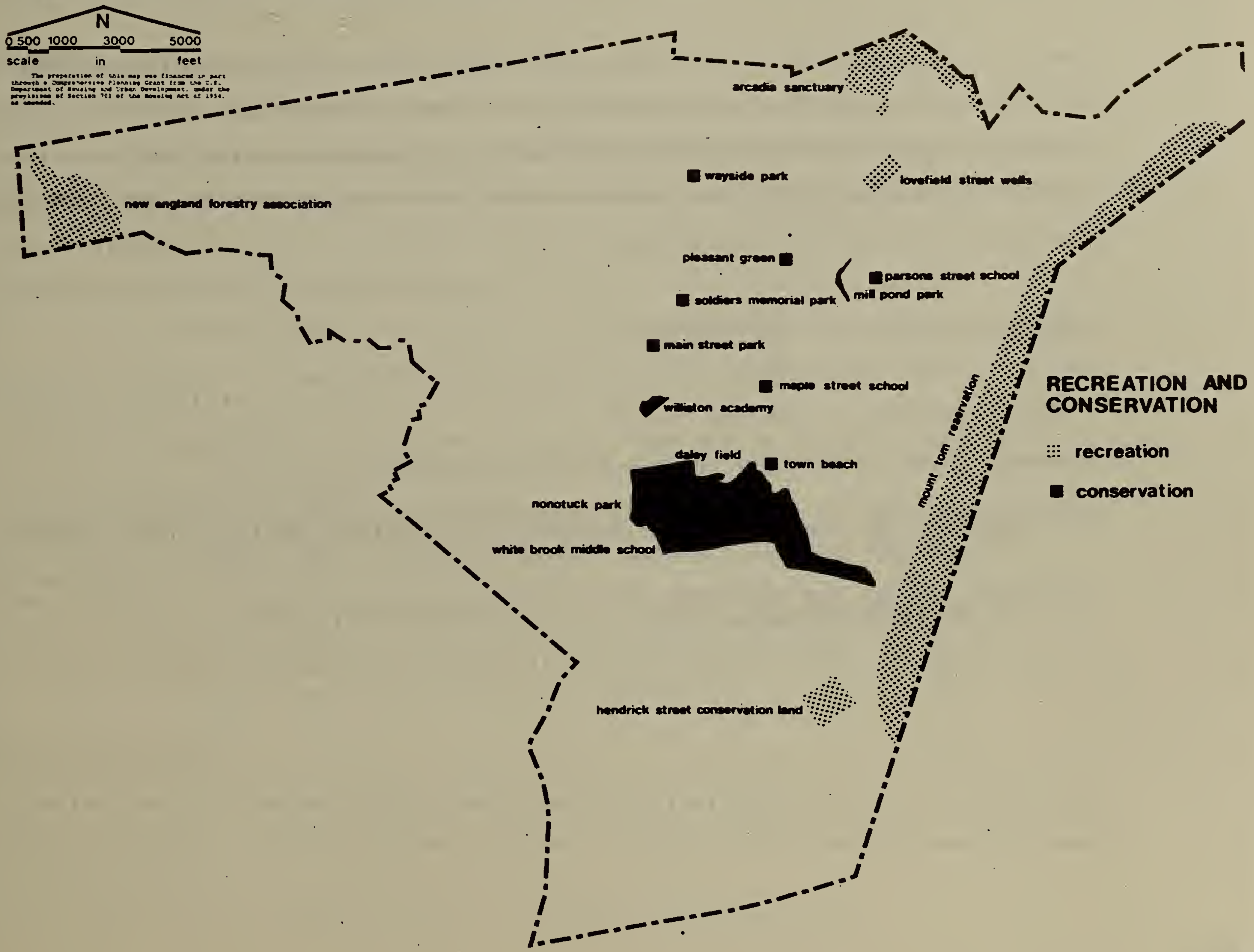
ACTIVE

TOWN OWNERSHIP	AREA	LEVEL OF SERVICE
Daley Field	6 acres	Tennis, swimming, field sports
Maple Street School	1/2 acre	Basketball
Nonotuck Park	40 acres	Swimming, field sports
Parsons Street School	1 acre	Basketball
Pleasant Green	4 acres	Field sports, playground equipment, wading
Town Beach	1 acre	Swimming
White Brook Middle School	25 acres	Tennis, swimming, field sports basketball

PASSIVE

TOWN OWNERSHIP	AREA
Hendrick Street conservation land	14 acres
Lovefield Street wellfield	27 acres
Main Street Park	1 acre
Mill Pond Park	4 acres
Mount Tom Reservoir land	3 acres
Nonotuck Park	45 acres
Soldiers Memorial Park	1 acre
Wayside Park	2 acres
STATE OWNERSHIP	
Mount Tom Reservation land	64 acres

EASTHAMPTON, MASSACHUSETTS



The preparation of this map was financed in part through a Comprehensive Planning Grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

There are some additional privately owned areas (such as Lucchesi's Grove and the Easthampton Rod and Gun Club) that have not been included in this listing. Some communities may wish to include small parcels of privately owned land, such as farms or camp sites which are available for public use; however, such areas may be developed if the owner so desires.

Sources for the Easthampton Study

Director, Town of Easthampton Park and Recreation Department.

Town of Easthampton Planning Board.

Chairman, Town of Easthampton Conservation Commission.

Metcalf and Eddy, Inc. *Master Plan for the Town of Easthampton, Massachusetts*. Prepared for the Easthampton Planning Board and the Massachusetts Department of Community Affairs. Boston: Metcalf and Eddy, Inc. 1971

De Chiara, Joseph and Koppelman, Lee. *Planning Design Criteria*. 2d. ed. New York: Van Nostrand Reinhold, 1975.

HISTORICAL AND UNIQUE FEATURES OVERLAY

The history of any community is physically portrayed in its land-use patterns, architecture, cemeteries, and monuments. In addition, there are also other areas that, because of their visual quality, natural attributes, and wildlife habitat, have distinct local appeal. It is such resources that determine the true character of a community and are important to preserve.

Making the Overlay

1. Historical Features

- If an Historic Commission has been established in the community, historic districts and some individual structures may have already been mapped. If no map exists, members of the Commission will be able to provide the necessary information.
- If no commission exists, it may be possible to obtain information from the local historic society. This society may have maps of Federal or State designated structures on the National Register. In any case, information will be available from members of the society.
- Consult with local officials and members of the community.
- Locate an authentic history of the community or information from literature of the area; these may be rich in historical facts.
- Place the relevant information onto an overlay of the base map.

2. Unique Features

- Consult with the Conservation Commission and other local officials.
- Check with the State Department of Public Works and Department of Environmental Management for information on scenic roadways and rivers which may be protected by State legislation.
- Check with the State Geologist for the presence of significant geological features.
- Transfer this information to an overlay of the base map.

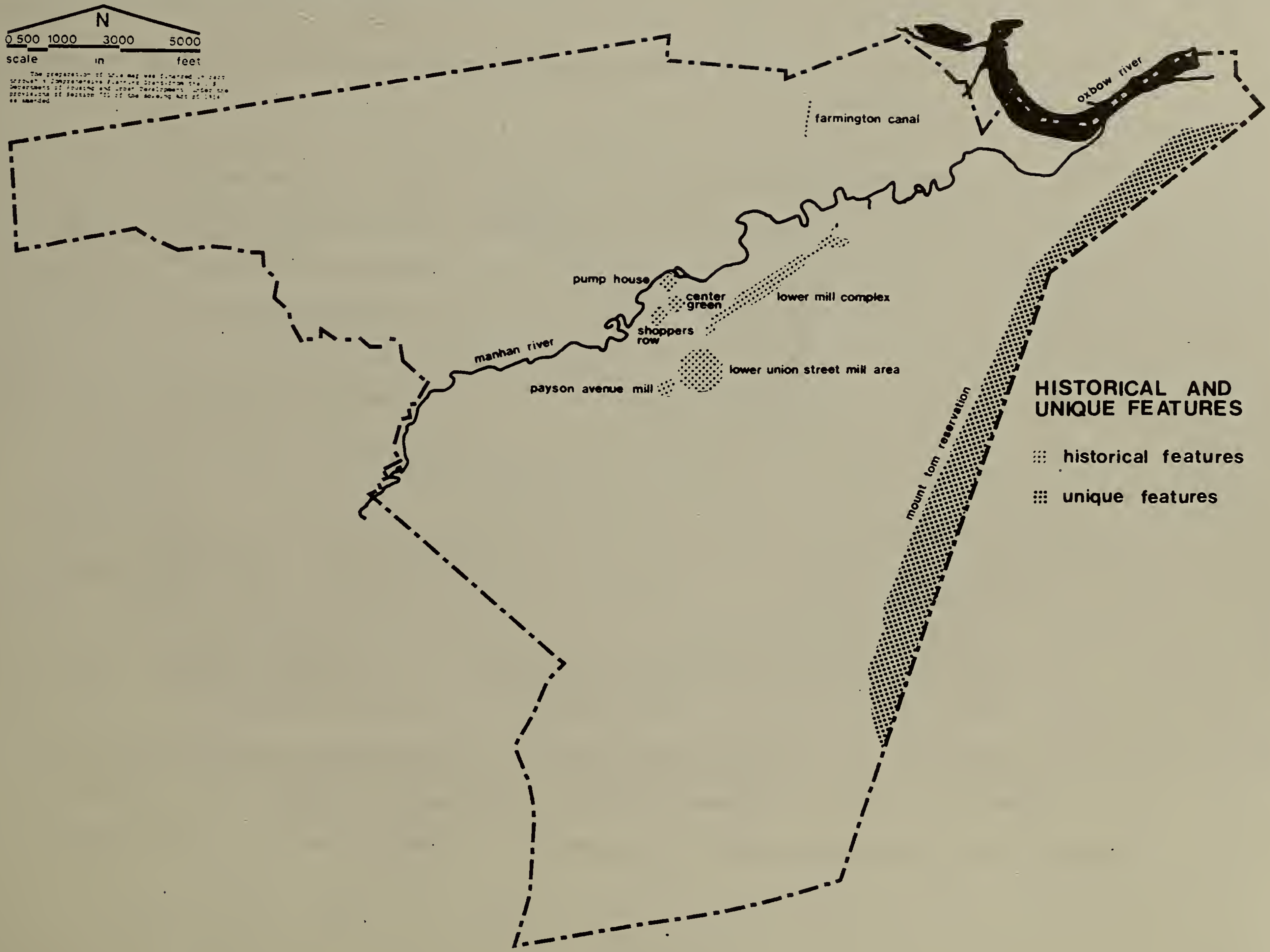
3. Wildlife Habitat

- Contact the local Conservation Commission for information on any endangered species or primary ecological niches.
- Information may also be available from local naturalists (i.e., high school biology teacher).
- Check with the Massachusetts Audubon Society, or a similar organization.
- Place the information onto the overlay of the base map.

Easthampton Study

The Easthampton Historical Society has identified four main areas and several individual structures in the Town worthy of preservation. The areas include the central

EASTHAMPTON, MASSACHUSETTS



commercial portion, the Lower Union Street section, the Manhan River at Northampton Street, and the Lower Mill section.

Among the most important of the Town's natural resources are the Oxbow of the Connecticut River, the stream valleys of the Manhan River and its numerous tributaries, and the Mount Tom Range, which is the home of the peregrine falcon. The Mount Tom Range is also the main water source for the Town. Two of Easthampton's wells are located just west of the southern summit on Broad Brook. Such resources warrant protection in order to retain the water supply, the landscape character, and the ecological balance of the Town.

Sources for the Easthampton Study

Easthampton, Massachusetts. Chamber of Commerce. Historic Past, Progressive Future. Easthampton: 1969.

First National Bank of Easthampton, Massachusetts. A Sampler of Firsts and Sundries in Our Town of Easthampton, Massachusetts. Easthampton: The Bank, 1975.

Town of Easthampton Historical Society.

Metcalf and Eddy, Inc. Master Plan for the Town of Easthampton, Massachusetts. Prepared for the Easthampton Planning Board and the Massachusetts Department of Community Affairs. Boston: Metcalf and Eddy, Inc. 1971

Arcadia Sanctuary, Easthampton, Massachusetts. (Massachusetts Audubon Society.)

LISTING OF SELECTED RESOURCES

COMPREHENSIVE OR MASTER PLANS

Description and Use: A general, long range plan adopted by a local government as a policy guide to decisions about physical development of the community. Includes text, maps, drawing, design -- describes historical background -- geographical and physical factors -- social and economic factors -- issues -- problems -- opportunities.

Sources: Varies.

AERIAL PHOTOS

Description and Use: Scale varies 1" = 600'; 1" = 1,667'; 1" = 1,320'; 1" = 1,000'. Display major circulation and development patterns -- identify water bodies; forests, farmed areas, gravel pits, etc. -- useful in noting activities on a regional scale -- display changes in land use and natural areas. Also available in stereographic sets.

Sources: Master List for each aerial photo company at:

Geodetic Division
Massachusetts Department of Public Works
100 Nashua Street
Boston, Massachusetts 02114 Telephone: 727-8287

Agricultural Stabilization and Conservation Service
Eastern Laboratory
Aerial Photography Division
ASCA - USDA
45 South French Broad Avenue
Asheville, North Carolina 28802

Soil Conservation Service Photos
Soil Conservation Service
Cartographic Division
U.S. Department of Agriculture
Hyattsville, Maryland 20251

Forest Service Photos
Chief Forest Service
U.S. Department of Agriculture
Washington, D.C. 20250

U.S.G.S. TOPOGRAPHIC MAPS

Description and Use: Map scale: 1" = 2,000'.

Display topographic contours at 10 feet intervals, streams -- water bodies -- wetlands, town names -- town and county boundaries -- roads -- fences -- clearings -- ditches -- houses -- buildings. Used for base map -- open space studies -- watershed identification -- development location. Need to update as may be out of date. Commonly referred to as USGS Quadrangle Sheets or Maps.

Sources: Johnson's Bookstore
1379 Main Street
Springfield, Massachusetts 01103 Telephone: 413/732-6222

Eastern Mountain Sports
1041 Commonwealth Avenue
Brighton, Massachusetts 02215 Telephone: 717/254-4250

Hammett's School Supplies
48 Canal Street
Boston, Massachusetts 02114 Telephone: 617/523-5778

United States Geological Survey
Geological Division
Distribution Office
1200 South Eads Street
Arlington, Virginia 22202

COMMONWEALTH OF MASSACHUSETTS. GENERAL HIGHWAY MAP. REGIONAL SERIES.

Description and Use: Map scale: 1" = 1,000'.

Portrays all roads, rivers and some sommunity landmarks. Only index map has legend. May be used for base map.

Source: Department of Public Works
Bureau of Transportation and Development
150 Causeway
Boston, Massachusetts 02114 Telephone 617/727-7715

MASSACHUSETTS MAP DOWN MAPS (MacConnell Maps)

Description and Use: Map scale: 1" = 2,000'

104 land cover types interpreted from aerial photos -- includes agricultural and open lands -- forest -- wetlands -- mining and waste disposal lands -- urban lands -- outdoor recreation facilities -- identifies regional and town resources -- useful for land use and open space studies.

NOTE: boundaries at a town scale may be inaccurate.

Source: Cooperative Extenstion Service
Department of Forestry and Wildlife Management
University of Massachusetts
Amherst, Massachusetts 01002. Telephone 413/545-2766

EXISTING LAND USE MAPS

Description and Use: Scale varies depending upon source.

Most regions have generalized maps -- many towns have completed their own detailed maps. Indicate existing land use and growth patterns -- invaluable for the planning process to determine future development.

Sources: Private firms.

Local Planning Department or Agencies;

Regional Planning Agency;

ASSESSORS MAPS

Description and Use: Map scale: 1" = 100' or 1" = 200'.

Portrays lines -- owners' names -- easements -- roads -- buildings. Used for tax purposes -- property location -- to determine ownership

Source: Town initiated.

TOWN ZONING MAP

Description and Use: Scale: Varies 1" = 500' to 1" = 1,000'.

Delineates the various districts in the town. Each town has own method. Information may also include property lines, roads, wetlands. Used to check adequacy of zoning districts and potential zoning violations.

Source: Town initiated

STATE CENSUS

Office of the Secretary of the Commonwealth
Census Division
1 Ashburton Place, 17th Floor
Boston, Massachusetts 02108 Telephone: 617/727-2846

FEDERAL CENSUS

United States Department of Commerce
Census Bureau Regional Office
441 Stuart Street
Boston, Massachusetts 02116 Telephone: 617/223-0668

CIRCULATION MAPS

Description and Use: Scale varies.

Describes different kinds of ways -- arterial -- collector -- minor -- highways -- pinpoints traffic flow -- may indicate some problem areas -- where improvements necessary

Source: Town initiated.

TOPICS PROGRAM
Massachusetts Department of Public Works
100 Nashua Street
Boston, Massachusetts 02114 Telephone: 617/727-4897

TOWN WATER, SEWER, OR DRAINAGE MAPS

Description and Use: Scale varies. 1" = 500' to 1" = 1,000'.

Lays out existing public water and sewerage systems -- may indicate potential service areas -- size mains-pipes -- locates pumping stations -- wells -- resevoirs treatment plants. May pinpoint problem areas -- guide new development.

Sources: Town Engineer
Outside Consultant

TOWN SUBDIVISION MAPS

Description and Use: Scale: 1" = 40' to 1" = 60'.

Great detail of each site -- dimension of property -- location and size of house -- easement measurements -- used by planning board.

Source: Applicant.

SOIL CONSERVATION SERVICE

SOIL SURVEY MAPS

Description and Use: Map scale: 1" = 2,000'; 1" = 1,320; 4" = 1 mile.

Identifies soil types -- brief interpretations for homesites, septic tanks, schools, athletic fields, etc.* Town receives field sheet (aerial photos) and 1 map and index.

*NOTE: Cannot be used for site work; boundaries general location only.

SPECIAL SOIL REPORTS FOR COMMUNITIES

Description and Use: Scale: 1" = 1,320'.

Detailed analysis of each soil -- copies of soil survey mapping sheets -- interpretive maps. Rather costly.

NOTE: The Soil Conservation Service also administers other programs for communities. These include Natural Resource Inventories, Town Comprehensive Plans and Conservation Planning. Information concerning these programs or any other type of assistance may be acquired from soil conservation offices which are conveniently located throughout the State.

Source: Department of Agriculture, Soil Conservation Service
29 Cottage Street
Amherst, Massachusetts 01002 Telephone: 413/549-0650

FLOOD PLAIN INFORMATION MAPS

Description and Use: Scale: 1" = 500' to 1" = 1,000'.

Indicates standard flood plain -- 100 year evaluation -- determines flood plain district -- where to locate structures due to flood potential.

NOTE: Not available for all towns and rivers.

Source: Army Corps of Engineers
Flood Plain Management Services
424 Trapelo Road
Waltham, Massachusetts 02154
Telephone: 617/894-2400, Ext. 545

FLOOD HAZARD BOUNDARY MAP

Description and Use: Scale: 1" = 1,000' to 1" = 2,000'.

Indicates flood prone areas based on 100 year flood figures and supplementary information from town. Required for HUD Flood Insurance Program. -- Program voluntary.

Source: Department of Housing and Urban Development
John F. Kennedy Federal Building
Boston, Massachusetts 02114
Telephone: 617/223-2616

ADDITIONAL SOURCES

LOCAL RESOURCES

Town officials, elected and appointed, such as:

Town Engineer

Town Planning Board

Conservation Commission

Historic Society

Town Documents such as Town Reports.

REGIONAL RESOURCES

Berkshire County Regional Planning Commission
10 Fenn Street
Pittsfield, Massachusetts 01201 Telephone: 413/442-1521

Cape Cod Planning and Economic Development Commission
First District Court House
Barnstable, Massachusetts 02630 Telephone: 617/362-2511, Ext. 477

Central Massachusetts Regional Planning Commission
70 Elm Street Telephone: 617/756-7717
Worcester, Massachusetts 01609 756-8042

Franklin County Department of Planning
Court House
Greenfield, Massachusetts 01301 Telephone: 413/773-3003

Northern Middlesex Area Commission
144 Merrimack Street
Lowell, Massachusetts 01852 Telephone: 617/454-8021

Lower Pioneer Valley Regional Planning Commission
Town Office Building
26 Central Street
West Springfield, Massachusetts 01089 Telephone: 413/739-5383

Martha's Vineyard Commission
P.O. Box 1447
Oak Bluffs, Massachusetts 02557 Telephone: 617/693-3453

Merrimack Valley Planning Commission
87 Winter Street
Haverhill, Massachusetts 01830 Telephone: 617/374-0519

Metropolitan Area Planning Council
44 School Street
Boston, Massachusetts 02108 Telephone: 617/523-2454

Montachusett Regional Planning Commission
150 Main Street
Fitchburg, Massachusetts 01420 Telephone: 617/345-7376

Nantucket Planning and Economic Development Commission
Broad Street
Nantucket, Massachusetts 02554 Telephone: 617/228-9625

Old Colony Planning Council
232 Main Street
Brockton, Massachusetts 02401 Telephone: 617/583-1833

Southeastern Regional Planning and
Economic Development District
7 Barnabas Road
Marion, Massachusetts 02738 Telephone: 617/748-2100

Massachusetts Federation of Planning Boards
P.O. Box 264
Braintree, Massachusetts 02184 Telephone: 617/843-5486

STATE RESOURCES

Department of Community Affairs

Office of Local Assistance
1 Ashburton Place, 16th Floor
Boston, Massachusetts 02108 Telephone: 617/727-3197

Executive Office of Environmental Affairs

Division of Coastal Zone Management
Division of Conservation Services
Department of Fisheries and Wildlife
Department of Environmental Quality Engineering
Department of Environmental Management
100 Cambridge Street
Boston, Massachusetts 02202 Telephone: 617/727-7700

Department of Public Works

Bureau of Transportation and Development
150 Causeway
Boston, Massachusetts 02114 Telephone: 617/727-5120

Office of State Planning
1 Ashburton Place, 21st Floor
Boston, Massachusetts 02108 Telephone: 617/727-5066

State Geologist
100 Nashua Street
Boston, Massachusetts 02114 Telephone: 617/727-4793

INTERSTATE RESOURCES

New England Interstate Water Pollution Control Commission
607 Boylston Street
Boston, Massachusetts 02116 Telephone: 617/261-3758

New England Regional Commission (NERCOM)
55 Court Street
Boston, Massachusetts 02108 Telephone: 617/223-6380

New England River Basins Commission (NERBC)
55 Court Street
Boston, Massachusetts 02108 Telephone: 617/223-6244

FEDERAL RESOURCES

Geological Survey
Water Resources Division
150 Causeway
Boston, Massachusetts 02114 Telephone: 617/223-2822

The following source was helpful in the compilation of this listing:

Index of Common Maps. In Wetlands and Floodplains on Paper by Barbara Lahr Maire, Elizabeth Kline, and James C. Colman. Lincoln, Mass.: Massachusetts Audubon Society, Wetlands Project, 1976.

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EVALUATION SURVEY
DCA IN-DEPTH STUDY PROGRAM

The Department is conducting an evaluation survey of its in-depth study program and requests recipients of this report to evaluate its effectiveness. It would be greatly appreciated if you would take a few minutes of your time to complete the following survey form, and return it to:

Massachusetts Department of Community Affairs
Office of Local Assistance
1 Ashburton Place - Room 1619
Boston, Massachusetts 02108

For all the following questions, please place appropriate letter rating in the column indicated. The letter ratings are:

A - High or Excellent
B - Above Average or Good
C - Fair or Average
D - Poor or Below Average
N/A - Not Applicable

Title of Report: PREPARING A DEVELOPMENT CONSTRAINTS INFORMATION SYSTEM - EASTHAMPTON	
	Letter Rating
1. Applicability to your constituents' or community's problems/issues/concerns.	
2. Usefulness to your constituents or community in:	
a. Solving problems/issues;	
b. Providing insights to problem solving;	
c. Catalyzing local officials' action;	
d. Stimulating local discussion and providing focus.	
3. Adequacy of subject matter treatment	
4. Quality of writing and readability	
5. Quality of graphic material	
6. Adequacy as a self-teaching or "how to" manual	
7. Timeliness of subject matter to current local issues	

OVER

8. Is follow-up by DCA staff to discuss the content of this report necessary? _____ not necessary? _____. If necessary, would group training seminars be acceptable? Yes _____ No _____
Prefer individual meetings and discussions Yes _____ No _____
Other _____

____

____

9. Should the in-depth study program continue? Yes _____ No _____
If no, please indicate reason.

____

____

10. Should the in-depth study program continue? Yes _____ No _____
If yes, what would you suggest?

____

____

____

11. What was your reason for requesting the report?

____

____

12. Other comments/ remarks:

____

____

____

____

13. Optional:

Name: __________________________________

Address: ________________________________

____

____

Telephone: ______________________________

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* A GUIDE TO CITIZEN PARTICIPATION (SUPPLEMENT)

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